

CHAPTER 3

Environmental Setting, Impacts and Mitigation Measures

This chapter of the EIR evaluates the potential significant environmental impacts associated with the construction, operation, and maintenance activities of the proposed project. This chapter also provides a full scope of environmental analysis in conformance with CEQA and the *CEQA Guidelines*.

The Initial Study for the proposed project determined that there was no evidence that the proposed project would cause significant environmental effects related to three environmental resources: agricultural resources, and mineral resources. The Initial Study identified the potential for the proposed project to result in significant impacts to the following environmental resources warranting further analysis: aesthetics; air quality; cultural resources; geology and soils; hazards; hydrology, water quality, and National Pollutant Discharge Elimination System; land use; noise; population and housing; public services and utilities; and transportation and circulation. The Initial Study also determined that biological issues would be less than significant. However, subsequent to distribution of the Initial Study, migratory birds were seen within the Alamitos Bay Marina in the vicinity of the project site. Therefore, this document includes a discussion of potential impacts to migratory birds.

The above environmental resource sections include an analysis, by issue area, of the proposed project on the environment in compliance with the *CEQA Guidelines*. Each environmental issue area includes the following subsections:

- Environmental Setting;
- Regulatory Background; and
- Environmental Impacts and Mitigation Measures.

3A. Aesthetics

This section provides a discussion of the existing visual and aesthetic resources on the proposed project site and in the surrounding area. This section also analyses the potential impacts from implementation of the proposed project. A field survey of the project site and the immediate surrounding area (areas within view of the site) was conducted on June 2, 2005, to evaluate the existing setting and develop an informed assessment of the potential effects of the proposed project on visual and aesthetic resources.

3A.1 Environmental Setting

Regional Character

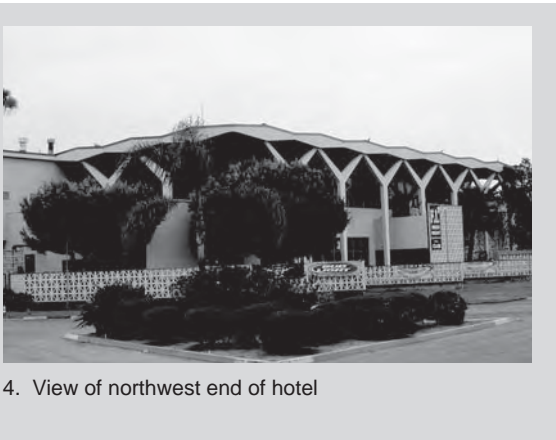
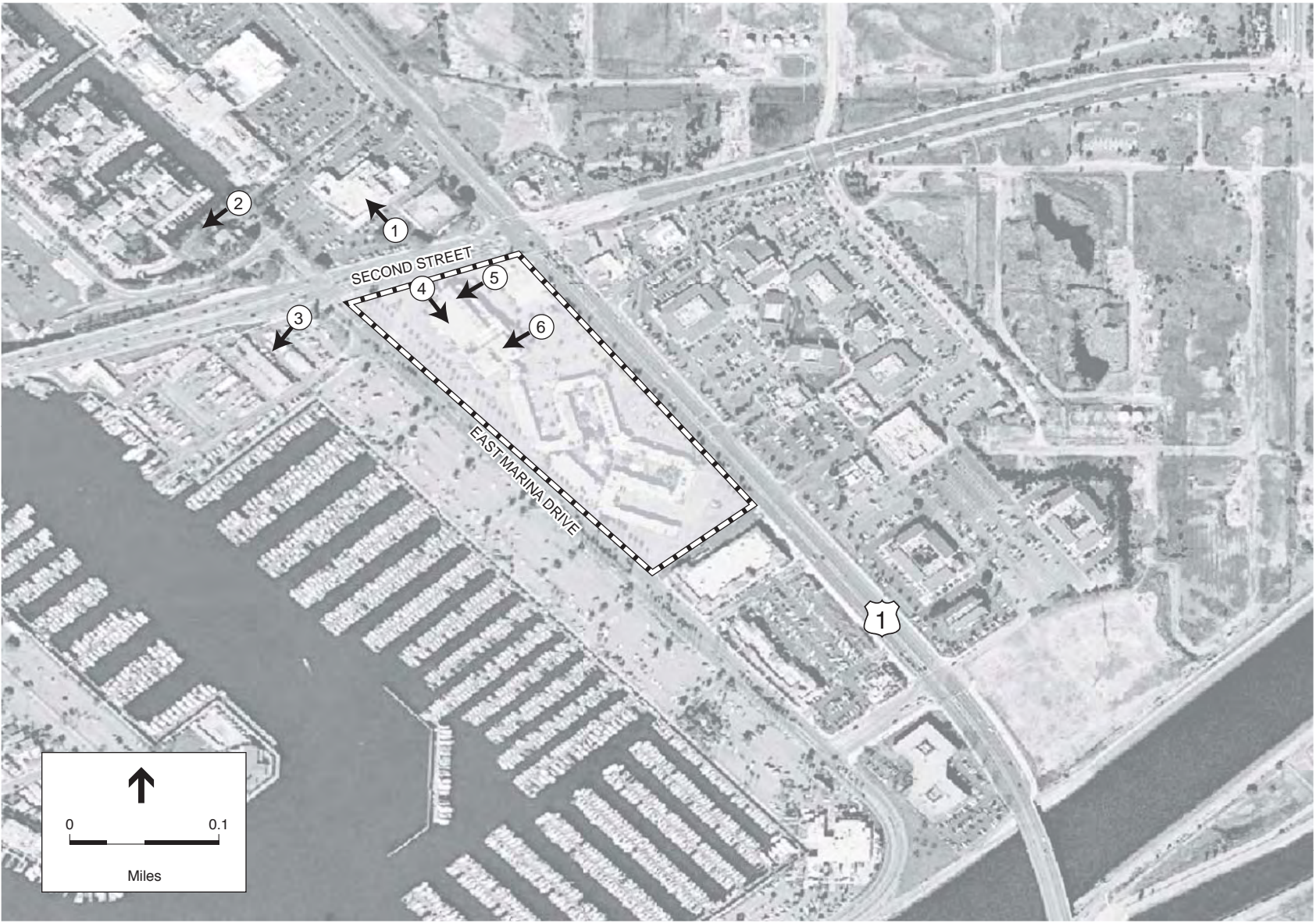
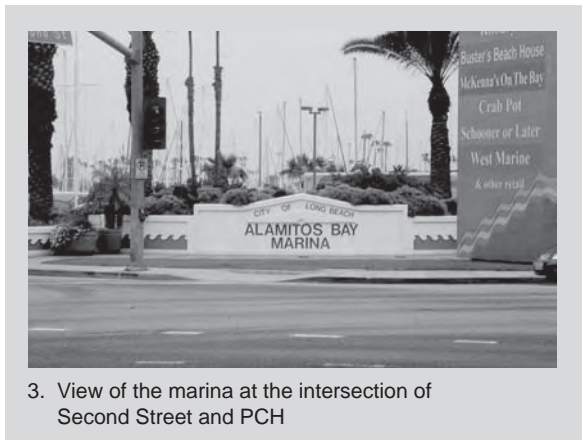
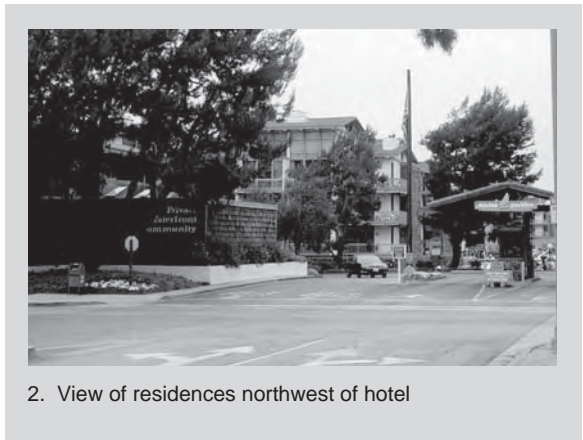
The proposed project site is located in the City of Long Beach between the San Gabriel River and the Los Cerritos Channel. The site lies within the southwestern block of the Los Angeles Basin that is comprised of a low alluvial floodplain. The floodplain is punctuated by a line of elongated low hills, folds, and faults that delineate the northwest-trending Newport-Inglewood Structural Zone. Floodplain deposits from the Los Angeles River and the San Gabriel River have contributed to the formation of the coastal plain on which the site is located. Prior to local development, the general site area consisted of tidal marshes that received alternating deposits of marine sands, organic silts and clays, and fluvial deposits, similar to the near-surface sediments beneath the site. Based upon review of historical documents, fill materials were placed on-site, elevating it above the level of the former tidal marsh. The site is situated on generally flat topography at elevations between 5 and 10 feet above mean sea level.

On-site and Surrounding Visual Elements

Project Site Scenic Resources

The project site is relatively flat and is developed with the Seaport Marina Hotel, surface parking, and associated landscaping; a former service station was previously located on the northeast corner of the site. **Figure 3A.1** illustrates the existing conditions and aesthetic character of the project site and surrounding area. The Seaport Marina Hotel includes 250-rooms within 164,736 square feet of space, and covers roughly 30 percent of the project site. Enterprise Car Rental, The Elks Club and a night club are located within the hotel, near the lobby.

The on-site buildings are two stories in height and have plain façades with little architectural detailing. Most of the buildings are constructed of wood frames and concrete slabs with exterior stucco, concrete walls, glass windows, metal railings, rolled roofing, and stone wall detailing. The main structure consists of offices as well as banquet, multi-purpose meeting, and dining rooms with patio areas. The other buildings



consist primarily of hotel rooms with balconies. Mature tall palm trees line the site on all sides. In addition, the northeastern section of the site that was previously occupied by a service station is in the process of being remediated and has monitoring well equipment on-site.

Surrounding Scenic Resources

As shown in Figure 3A.1 and described below, the project site is located in an urbanized area with retail and commercial uses that are located along the major roadways bordering the site.

- **North:** Uses along Second Street include a one-story grocery store and bank. The Marina Pacifica Mall, which includes larger retail, restaurant and entertainment uses, is located north of the grocery store and bank. These uses are setback along PCH, and all have surface and some subterranean parking. The area to the northwest of the project site is Marina Pacifica, a private waterfront community consisting of attached residences. The residences are condominiums, ranging from three to five stories in height. Also to the northwest is the Long Beach Marina with a boat launch located south of the Marina Pacifica condominiums. The area northeast of the site consists of a fast food restaurant (northwest corner of Second Street and PCH), oil wells and the Los Cerritos wetlands.
- **South:** Adjacent to the project site along PCH is Marina Shores, a retail center with restaurants, a grocery store, services, and other retail. This center continues to the intersection of PCH and Studebaker Road. Beyond Studebaker Road, southeast of the project site, are more oil infrastructure facilities and a two-story office building, to the southwest, and the San Gabriel River.
- **East:** Land uses near the intersection of Second Street and PCH include a service station (southeast corner of Second and PCH). Across from the site on PCH, is The Marketplace, a one-story retail center that includes several restaurants, a grocery store, many small retail shops, and movie theaters. South of the retail center on the east side of PCH, are several one- and two-story office buildings and the Los Cerritos wetlands. In addition, a crude oil pipeline and easement is located along the eastern boundary of the site (see Figure 2.1).
- **West:** Directly west of the project site (across Marina Drive) is the publicly-owned Alamitos Bay Marina. The parking lot for the Marina occupies most of the area west of the project site (approximately 1,177 parking spaces). Along Marina Drive are restaurants and some boat related retail.

Light and Glare

Nighttime lighting is present on the project site and surrounding area, and includes street lights, building façade lighting along PCH, Second Street and Marina Drive, and illumination from vehicle headlights. For purposes of this aesthetic analysis, the primary

light-sensitive uses in the vicinity of the proposed project include the residential neighborhood located northwest of the project site (Marina Pacifica) and the marina located west of the site.

Sensitive receptors relative to glare generation include motorists traveling on the surrounding roadways. There are no buildings, structures, or facilities on the project site that presently generate substantial glare since most of the buildings on the project site are constructed of non-reflective materials and have few windows.

Existing Views

Viewer sensitivity or concern is based, in part, on the visibility of resources in the landscape, the proximity of viewers to the visual resources, the relative elevation of viewers to the visual resources, the frequency and duration of views, the number of viewers, and the types and expectations of the individuals and viewer groups. Generally, visual sensitivity increases with an increase in total number of viewers, the frequency of viewing, and the duration of views. Visual sensitivity is generally higher for views seen by people who are driving for pleasure, engaging in recreational activities, or who are homeowners. Sensitivity is generally lower for people commuting to and from work.

Sensitive viewers are generally associated with land uses such as residential, school, church, and passive open space/recreation uses. In the project vicinity, many of the surrounding land uses would not be considered sensitive viewers. However, residential uses to the northwest of the site are sensitive viewers, although such exposure would be limited because of the substantial buffer provided by Second Street.

3A.2 Regulatory Background

Local

General Plan

The Long Beach General Plan includes several elements that address issues related to urban design and the overall aesthetic quality of the City. The Land Use Element (LUE), updated in 1989, includes an Urban Design Analysis that outlines several features and policy directions for the urban character of the City, including the importance of building heights and masses and also emphasizes visual compatibility, good design and landscaping. The LUE focuses on preservation of certain features such as the sandy beach frontages and bluffs and also includes provisions for “positive design steps” to improve the appearances along many of the streets in Long Beach (see Section 3G. Land Use of this EIR for a discussion of potential land use impacts).

The Transportation Element, updated in 1991, of the Long Beach General Plan includes a functional classification of streets that addresses the integration of land use and transportation policies. Policy Five of the Functional Classification of Streets section of

the element calls for the application of a strict set of design criteria to future improvements to assure aesthetic appeal to the users and residents, including the undergrounding of utilities and landscaping where appropriate.

The Scenic Routes Element of the General Plan is relevant to aesthetics, views and light and glare. The Scenic Routes Element was adopted in 1975 and addresses aesthetic and physical design throughout the City. This element identifies Second Street and Marina Drive as potential Local Scenic Routes. However, the only officially designated scenic route within the City of Long Beach is Ocean Boulevard, which is located outside of the area immediately surrounding the project site.

The LUE includes information on design controls/architectural compatibility specific to PD-1 stating “Architectural conformance is considered of paramount importance and must be strictly adhered to.”¹ The LCP also contains guidance on visual resources in the PD-1 (SEADIP). The LCP recognizes the diversity found within PD-1 (SEADIP) and encourages a comprehensive and integrated development approach. Section 3G. Land Use discusses the LCP and analyzes the potential impacts related to the proposed projects in greater detail.

City of Long Beach Zoning Ordinance

The City of Long Beach Zoning Ordinance regulates urban form and aesthetics through land use designations and implementation of development standards. The project site is zoned PD-1 (SEADIP). The ordinance dictates the height limitations and setbacks of the buildings on the project site. Section 3G. Land Use of this EIR discusses the zoning ordinance and analyzes the potential impacts associated with implementation of the proposed projects in greater detail.

3A.3 Environmental Impacts and Mitigation Measures

Methodology

The project proposes to change the land use of the site from low density, low-rise tourism-oriented uses to medium-to-high density, medium-rise mixed retail/residential uses. Implementation of the proposed project would result in the demolition of a 250-room two-story hotel. The potential exists for impacts to the viewsheds of surrounding areas as well as to pedestrians, bicyclists, and motorists passing through the area on surrounding sidewalks, bike paths, and streets due to the redevelopment of the site and on-site activities.

The potential aesthetic impacts of the proposed project are evaluated considering such factors as the scale, mass, proportion, orientation, architectural detailing, and

¹ City of Long Beach, Department of Planning and Building, *Land Use Element of the Long Beach General Plan*, revised and reprinted April 1997, page 169.

landscaping/buffering associated with the design of the proposed project. In order to conduct this analysis, panoramic photographs of existing views of the project site are provided in Figure 3A.1.

Significance Criteria

The criteria used to determine the significance of an impact are based on the Initial Study Checklist in Appendix G of the *CEQA Guidelines* and City precedent.

For this analysis, the proposed project may result in significant impacts if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Project Impacts

Impact 3A.1: Could the proposed project have a substantial adverse effect on a scenic vista?

As described above, all areas surrounding the proposed project site are developed with urban uses. There are scenic vistas of the marina in the project area. Existing views of this scenic resource from areas such as PCH are currently blocked by the hotel. The focal visual point of the proposed project would be the marina, and orientation of the proposed project is designed to maximize such views from the site. The proposed project would provide view corridors on two internal streets from PCH through to Marina Drive.

The proposed project would alter the visual character of the site by demolishing the existing two-story 250-room hotel buildings, and constructing an up to five-story medium-rise (68-foot maximum) mixed-use community. The new development, which would orient towards the marina, would result in increased density on the project site. The proposed project would challenge City development standards regarding height limitations. The project would, however, incorporate perimeter landscaped setbacks along street frontages as well as internal landscaping in parking lots.

The proposed project would not meet the 10-foot setback regulation along Second Street and would require a Standards Variance. The decreased setback would accommodate the increased density of the proposed project, which is consistent with the urban character of the area. Section 3G. Land Use of this EIR discusses and analyzes this issue in greater detail.

Because of the siting and incorporation of previously discussed project features, the proposed project would blend with its surroundings when viewed from a significant distance and elevation. Therefore, the effect of the proposed project on any scenic vistas that might exist from a distant off-site area is not considered adverse, and no mitigation is necessary.

Conclusion: The proposed project would have a less than significant impact on a scenic vista.

Mitigation: None required.

Significance After Mitigation: Less than significant.

Impact 3A.2: Could the proposed project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

An aerial photograph showing the location of the project in the context of its surrounding land uses is shown in Figure 2.1. The portion of PCH located adjacent to the project site, is not a designated state scenic highway: Second Street and Marina Drive are proposed Local Scenic Routes but not officially designated as such.²

The proposed project would be developed in accordance with the stated policies and goals of the Scenic Routes Element of the General Plan. The proposed project would include landscaping along Second Street and Marina Drive and within the marina parking lot west of the site. The project would therefore, enhance views of the site from both Second Street and Marina Drive, as well as enhance the scenic resources of the marina and facilities.

As discussed in Section 3G. Land Use of this EIR, the proposed project does not fully address the PD-1 (SEADIP) open space requirements, since it would provide less than the required 30 percent of the site for open space uses. The overall intent of the PD-1 (SEADIP) is to provide a community of residential, business, and light industrial uses integrated with a system of parks, open space, and trails. The proposed project substantially complies with the open space standard, integrating usable open space into the site design. The landscaping along PCH and Marina Drive is in excess of the required setback and includes bike trails and a promenade, which demonstrates that the project serves to fulfill the overall intent of PD-1 (SEADIP). The proposed project would also provide landscaping and a promenade across Marina Drive in the City-owned marina parking lot.

² City of Long Beach, Department of Planning and Building, *Scenic Routes Element (Scenic Highways)*, May 9, 1975.

The current Seaport Marina Hotel is not distinctive in its design, nor associated with events of significance, and is not likely to yield important historic information. It is not eligible for listing on the California Register of Historical Resources and is not considered a historic scenic resource, as discussed in greater detail in Section 3C. Cultural Resources of this EIR. The proposed project site is relatively flat and there are no scenic rock outcroppings. Project impacts to scenic resources in the vicinity of the proposed project are considered less than significant, and no mitigation is required.

Conclusion: The proposed project would have a less than significant impact on scenic resources.

Mitigation: None required.

Significance After Mitigation: Less than significant.

Impact 3A.3: Could the proposed project substantially degrade the existing visual character or quality of the site and its surroundings?

The proposed project would increase the density of development of the site as viewed from surrounding areas. Impacts would be both short-term and long-term in nature.

Construction

Short-term impacts are expected to occur during the anticipated 22-month construction period. The potential short-term visual impacts of the site demolition, grading and construction activities would include exposed dirt storage and staging areas for construction. This short-term condition would create a temporary visual distraction typically associated with construction activities. The construction would last approximately 22-months with a portion of construction involving interior finishing that would be less distracting to surrounding views than exterior construction. Standard conditions related to construction area barriers would be imposed by the City. With implementation of this measure, visual impacts related to short-term construction activities would be less than significant.

Operation

Long-term impacts would be associated with massing and design of the buildings after completion of construction. The proposed project would introduce a higher density use to the project site than the current hotel. Under the proposed project, the setback along Second Street would be five feet to accommodate the increased density and massing and would, therefore, require a Standards Variance. This issue is addressed in Section 3G. Land Use. The increase in building density is consistent with the urban character of some of the surrounding buildings (for example, the Marina Pacifica condominiums.) yet dissimilar to the nearby marina.

The proposed project would also replace the existing two-story hotel with an up to five-story mixed-use community. The maximum building height of the proposed project would be 68 feet. The increase in building height would also be consistent with the urban character of the area (for example, the Marina Pacifica residential and commercial developments to the north).

The proposed structures would be more similar in scale and form to the three- to five-story buildings in the vicinity than the one-story uses with surface parking. Figures 2.4 through 2.9 shows elevations associated with the project, and Figure 3A.1 illustrates heights of some of the surrounding buildings. The proposed project would include setbacks on the ground level and residential uses with second level open spaces located above the retail spaces on the ground floor.

The proposed project would provide landscaping improvements, high-quality building materials, and consistent integrated architecture design visible from the public rights-of-way, as outlined in PD-1 (SEADIP). The proposed project would also be required to submit the architectural review to the City to ensure that the design is consistent with the City's Guiding Principles Design standards. Therefore, long-term impacts would be less than significant.

Conclusion: With incorporation of mitigation measures, the proposed project would have a less than significant impact on the existing visual character and quality of the site and its surroundings.

Mitigation Measure

Measure 3A.1: Prior to the issuance of any demolition permit, the applicant shall construct and maintain a solid security fence, around the perimeter of the site, the height of which shall be determined by the Director of Planning and Building. The construction site shall be kept clear of trash, weeds, etc.

Significance After Mitigation: Less than significant.

Impact 3A.4: Could the proposed project create a new source of substantial light or glare that could adversely affect day or nighttime views of the area?

The proposed project area is presently located within an urbanized area surrounded by a mix of residential and retail land uses. The existing uses include interior and exterior building lighting, parking lot lighting, and landscape lighting. The project proposes higher density uses than currently exist. These uses would produce additional nighttime lighting and potential associated glare impacts.

Project lighting would provide even illumination of the exterior spaces, and secondary lighting of signage and accent lighting of plant materials would also occur. The project

includes subterranean parking garages that would result in a slight decrease in nighttime lighting as compared to the existing hotel that has only surface parking lots. Lighting on the proposed project site could be detectable from the surrounding areas, as is typical for residential as well as urban development in the area. The residences northwest of the proposed project site could be impacted by lighting at the proposed project. All on-site lighting would be subject to a Lighting Plan approved by the City of Long Beach Director of Planning and Building. Positioning all building lighting to be directed on to the proposed project site would reduce potential impacts to less than significant levels.

Implementation of the proposed project could result in increased glare in comparison to existing conditions. The proposed project would also incorporate landscaping and a canopy of trees over the outdoor common areas in the retail component that would help absorb some of the glare. Implementation of mitigation measures would reduce impacts to less than significant levels.

Conclusion: With the incorporation of mitigation measures, the proposed project would have a less than significant impact on light and glare that could adversely affect day or nighttime views of the area.

Mitigation Measures

Measure 3A.2: Prior to the issuance of any building permit, the applicant shall demonstrate on the final project plans that all exterior lighting shall be limited to ground level and the plazas to accent project landscaping areas. Security lighting shall be used in the proposed project area such as in the plazas of the building and limited to project entrances, landscaping, as well as loading areas. All lighting shall be shielded to prevent “spillover” to adjacent properties. Demonstration shall be to the satisfaction of the Director of Planning or Building.

Measure 3A.3: Prior to the issuance of any building permit, the applicant shall demonstrate on the final project plans that the proposed project shall use non-reflective building materials and careful selection of exterior building materials as well as window glass treatments. Prior to the completion of final plans and specifications for each structural element of the proposed project, plans and specifications shall be submitted to the Department of Planning and Building for review to ensure that the selection of exterior building materials and window glass treatments would not create uncomfortable levels of glare on public roadways or surrounding redirected areas for the structural elements of the proposed project. Demonstration shall be to the satisfaction of the Director of Planning or Building.

Significance After Mitigation: Less than significant.

Cumulative Impacts

Impact 3A.5: Could the proposed project result in an adverse cumulative aesthetics impact?

This analysis is based on the related projects list provided in Chapter 2 (Table 2.2). The listed projects include various commercial and retail projects located in the vicinity of the project site that are currently approved but not built, or proposed for development. The proposed project would occur in an area that has already been impacted by urban development. The redevelopment of the site would be aesthetically consistent with the character and level of development in the area. The proposed project, like the related projects, would be required to comply with height limits and building setbacks established by the City. Exceptions to the City code could occur on a project-by-project basis where an applicant might request a Standards Variance to incorporate a desired design element within the physical limitations of a project site. Overall, the proposed project in conjunction with the listed projects would not have a cumulative aesthetic impact.

Conclusion: The proposed project would not contribute to an adverse cumulative aesthetics impact.

Mitigation: None required.

Significance After Mitigation: Less than significant.

3B. Air Quality

This section addresses the impacts of the proposed project on ambient air quality and the exposure of people, especially sensitive individuals, to unhealthy pollutant concentrations, including the type and quantity of emissions that would be generated by the construction and operation of the proposed project. The analysis of project emissions focuses on whether the project could cause an exceedance of a state ambient air quality standard or an exceedance of a threshold set forth by SCAQMD.

3B.1 Environmental Setting

Regional Climate

Air quality is affected by both the rate and location of pollutant emissions and by meteorological conditions that influence movement and dispersal of pollutants. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients, along with local topography, provide the link between air pollutant emissions and air quality.

The City of Long Beach lies within the South Coast Air Basin (Basin). The distinctive climate of the Basin is determined by its terrain and geographical location. The Basin is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the southwest and high mountains around its remaining perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds.

Vertical dispersion of air pollutants in the Basin is hampered by the presence of persistent temperature inversions. High-pressure systems, such as the semi-permanent high-pressure zone in which the Basin is located, are characterized by an upper layer of dry air that warms as it descends restricting the mobility in the formation of subsidence inversions. Such inversions restrict the vertical dispersion of air pollutants released into the marine layer and, together with strong sunlight, can produce worst-case conditions for the formation of photochemical smog.

The atmospheric pollution potential of an area is largely dependent on winds, atmospheric stability, solar radiation and terrain. The combination of low wind speeds and low inversions produces the greatest concentration of air pollutants. On days without inversions, or on days of winds averaging over 15 mph, smog potential is greatly reduced.¹

Local Climate

The SCAQMD maintains a network of air quality monitoring stations located throughout the Basin and has divided the Basin into air monitoring areas. The monitoring stations

¹ SCAQMD, *CEQA Air Quality Handbook*, April 1993, p. A8-1.

record concentrations of various pollutants including: ozone (O₃); carbon monoxide (CO); nitrogen dioxide (NO₂); sulfur dioxide (SO₂); particulate matter less than 10 microns in diameter (PM₁₀); particulate matter less than 2.5 microns in diameter; lead (Pb); and sulfates. **Table 3B.1** summarizes the state and federal standards as well as the health effects and sources of the criteria pollutants.

TABLE 3B.1
AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

| Pollutant | Averaging Time | California Standard | Federal Standard | Pollutant Health and Atmospheric Effects | Major Pollutant Sources |
|--|------------------------|---|--|---|---|
| Ozone (O ₃) | 1 hour | 0.09 ppm | --- | High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue. | Motor vehicles. |
| | 8 hours | 0.07 ppm ^a | 0.08 ppm | | |
| Carbon Monoxide (CO) | 1 hour | 20 ppm | 35 ppm | Classified as a chemical asphyxiant, CO interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen. | Internal combustion engines, primarily gasoline-powered motor vehicles. |
| | 8 hours | 9 ppm | 9 ppm | | |
| Nitrogen Dioxide (NO _x) | Annual Arithmetic Mean | --- | 0.053 ppm | Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. | Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads. |
| | 1 hour | 0.25 ppm | --- | | |
| Sulfur Dioxide (SO _x) | Annual Arithmetic Mean | --- | 0.03 ppm | Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight. | Fuel combustion, chemical plants, sulfur recovery plants, and metal processing. |
| | 1 hour | 0.25 ppm | --- | | |
| | 3 hours | --- | 0.50 ppm | | |
| | 24 hours | 0.04 ppm | 0.14 ppm | | |
| Suspended Particulate Matter (PM ₁₀ / PM _{2.5}) | Annual Geometric Mean | 20 µg/m ³ (PM ₁₀) | --- | May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility. | Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g. wind-raised dust and ocean sprays). |
| | Annual Arithmetic Mean | 20 µg/m ³ (PM ₁₀) 12 µg/m ³ (PM _{2.5}) | 50 µg/m ³ (PM ₁₀) 15 µg/m ³ (PM _{2.5}) | | |
| | 24 hours | 50 µg/m ³ (PM ₁₀) | 150 µg/m ³ (PM ₁₀) 65 µg/m ³ (PM _{2.5}) | | |
| Lead (P _b) | Monthly | 1.5 µg/m ³ | --- | Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurologic dysfunction (in severe cases). | Present source: lead smelters, battery manufacturing and recycling facilities. Past source: combustion of leaded gasoline. |
| | Quarterly | --- | 1.5 µg/m ³ | | |

**TABLE 3B.1
AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS (CONT.)**

| Pollutant | Averaging Time | California Standard | Federal Standard | Pollutant Health and Atmospheric Effects | Major Pollutant Sources |
|-----------------------------|----------------|----------------------|------------------|---|-------------------------|
| Sulfates (SO ₄) | 24 hours | 25 µg/m ³ | --- | Decrease in ventilatory functions; aggravation of asthmatic symptoms; aggravation of cardio-pulmonary disease; vegetation damage; degradation of visibility; property damage. | Industrial processes. |

ppm parts per million
µg/m³ micograms per cubic meter

^a This concentration was approved by the CARB on April 28, 2005. In April 2005, the CARB approved a new eight-hour standard of 0.070 ppm and retained the one-hour ozone standard of 0.09 after an extensive review of the scientific literature.

SOURCE: CARB, *Ambient Air Quality Standards*, May 6, 2005.

The monitoring station most representative of existing air quality conditions in the project area is the Long Beach Monitoring Station, located at 3648 North Long Beach Boulevard in Long Beach, approximately eight miles northwest of the project site. Criteria pollutants, including O₃, CO, and NO₂ are monitored at this station. The most recent data relative to state standards available from these monitoring stations is shown in **Table 3B.2** and encompasses the years 2000 to 2004. In addition, Table 3B.2 compares the pollutants to the state air quality standards.

Ozone. During the 2000 to 2004 monitoring period, the state one-hour O₃ standard was exceeded between zero and three times annually at Long Beach Monitoring Station. The highest recorded one-hour O₃ concentration was 0.12 parts per million (ppm) (2000).

Carbon Monoxide. The Long Beach Monitoring Station did not record an exceedance of the state one-hour and eight-hour CO standards from 2000 to 2004. The highest recorded one-hour CO concentration was 10 ppm (2000) and the highest recorded eight-hour CO concentration was 5.8 ppm (2000).

Nitrogen Oxides. The Long Beach Monitoring Station did not record an exceedance of the state one-hour NO₂ standard from 2000 to 2004. The highest recorded one-hour NO₂ concentration was 0.14 ppm (2003).

Sulfur Oxides. The Long Beach Monitoring Station did not record an exceedance of the state one-hour or 24-hour SO₂ standards from 2000 to 2004. The highest recorded one-hour SO₂ concentration was 0.09 ppm (2001) and the highest recorded 24-hour SO₂ concentration was 0.001 ppm (2000-2004).

**TABLE 3B.2
AMBIENT AIR QUALITY SUMMARY, 2000-2004**

| Pollutant | Standard ^a | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|-----------------------|-------------|-------------|-------------|-------------|-------------|
| Ozone (O₃) | | | | | | |
| Highest 1-hr average, ppm ^b | 0.09 | <u>0.12</u> | <u>0.09</u> | <u>0.08</u> | <u>0.10</u> | <u>0.09</u> |
| Number of standard exceedance ^c | | 3 | 0 | 0 | 1 | 0 |
| Carbon Monoxide (CO) | | | | | | |
| Highest 1-hr average, ppm ^b | 20 | <u>10</u> | <u>6</u> | <u>6</u> | N/A | N/A |
| Number of standard exceedance ^c | | 0 | 0 | 0 | N/A | N/A |
| Highest 8-hr average, ppm ^b | 9.0 | <u>5.8</u> | <u>4.7</u> | <u>4.6</u> | <u>4.7</u> | <u>3.4</u> |
| Number of standard exceedance ^c | | 0 | 0 | 0 | 0 | 0 |
| Nitrogen Dioxide (NO₂) | | | | | | |
| Highest 1-hr average, ppm ^b | 0.25 | <u>0.13</u> | <u>0.11</u> | <u>0.13</u> | <u>0.14</u> | <u>0.12</u> |
| Number of standard exceedance ^c | | 0 | 0 | 0 | 0 | 0 |
| Sulfur Dioxide (SO₂) | | | | | | |
| Highest 1-hr average, ppm ^b | 0.25 | <u>0.05</u> | <u>0.09</u> | <u>0.03</u> | N/A | N/A |
| Number of standard exceedance ^c | | 0 | 0 | 0 | N/A | N/A |
| Highest 24-hr average, ppm ^b | 0.04 | <u>0.01</u> | <u>0.01</u> | <u>0.01</u> | <u>0.01</u> | <u>0.01</u> |
| Number of standard exceedance ^c | | 0 | 0 | 0 | 0 | 0 |
| Particulate Matter-10 Micron (PM₁₀) | | | | | | |
| Highest 24-hr average, µg/m ³ ^c | 50 | <u>105</u> | <u>91</u> | <u>74</u> | <u>63</u> | <u>72</u> |
| Number of standard exceedance ^{c,d} | | 12 | 10 | 5 | 4 | 2 |
| Annual Geometric Mean, µg/m ³ ^b | 30 | <u>34</u> | <u>34</u> | <u>34</u> | <u>33</u> | N/A |
| Exceedance? | | Yes | Yes | Yes | Yes | N/A |
| Particulate Matter-2.5 Micron (PM_{2.5}) | | | | | | |
| Annual Arithmetic Mean, µg/m ³ ^b | 12 | <u>19</u> | <u>21</u> | <u>20</u> | N/A | N/A |
| Exceedance? | | Yes | Yes | Yes | N/A | N/A |

NOTE: Underlined values indicate an excess of applicable standard.

^a State standard, not to be exceeded.

^b ppm - parts per million; µg/m³ - micrograms per cubic meter; N/A – not available.

^c Refers to the number of days in a year during which at least one exceedance was recorded.

^d Measured every six days.

SOURCE: SCAQMD, *Air Quality Data Summaries*, 2000-2002 and CARB, *Air Quality Data Statistics*, 2003-2004.

Particulate Matter (PM₁₀). The Long Beach Monitoring Station recorded multiple exceedances of the state PM₁₀ standard. The highest recorded 24-hour PM₁₀ concentration was 105 micrograms per cubic meter (µg/m³) (2000) and the state 24-hour standard was exceeded between two and 12 times annually. The annual geometric mean was also exceeded each year from 2000 through 2004 with high concentration of 34 µg/m³ recorded in years 2000-2002.

Particulate Matter (PM_{2.5}). The Long Beach Monitoring Station recorded multiple exceedances of the state PM_{2.5} standard. The annual arithmetic mean was exceeded each year with high concentration of 21 µg/m³ recorded in year 2001.

Sensitive Receptors

Some people are especially sensitive to air pollution emissions and should be given special consideration when evaluating air quality impacts from projects. These people include children, the elderly, persons with preexisting respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Structures that house these persons or places where they gather to exercise should also be considered sensitive receptors.² The nearest sensitive receptors are residences located north of Second Street along Marina Drive, approximately 600 feet from the project site.

3B.2 Regulatory Background

Federal Clean Air Act. The Federal Clean Air Act (CAA) is a comprehensive federal law that regulates air emissions from area, stationary, and mobile sources. This law authorizes the United States Environmental Protection Agency (USEPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. The CAA was passed in 1963, and has since undergone five major amendment cycles. The latest major amendment cycle was completed in 1990, with prior major amendments having occurred in 1965, 1967, 1970, and 1977.

The USEPA utilizes six “criteria pollutants” as indicators of air quality and has established for each of them a maximum concentration level (i.e., NAAQS) above which adverse effects on human health may occur. These six criteria pollutants are CO, O₃, SO₂, NO₂, inhalable particulate matter (PM₁₀ and PM_{2.5}), and lead. Federal standards for these criteria pollutants are displayed in Table 3B.1. The CAA specifies future dates for achieving compliance with the NAAQS and mandates that states submit and implement a State Implementation Plan (SIP) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The project site is located in a designated federal non-attainment area for certain criteria pollutants. The Basin fails to meet the federal standards for eight-hour O₃, PM₁₀, and PM_{2.5}. Deadlines for meeting the NAAQS within the Basin have been set as 2021 for eight-hour O₃ and 2006 for PM₁₀. The deadline for meeting the PM_{2.5} standard has not been set.

California Clean Air Act. In 1988, the state legislature passed the California CAA, which established California’s air quality goals, planning mechanisms, regulatory strategies, and standards of progress for the first time. The California CAA provides the state with a comprehensive framework for air quality planning regulation and sets state air quality standards. The CAAQS incorporate additional standards for most of the criteria pollutants and has set standards for other pollutants recognized by the state. In general, the state standards are more health protective than the federal standards. California has also set standards for PM_{2.5}, sulfates, hydrogen sulfide, vinyl chloride, and

² SCAQMD, *CEQA Air Quality Handbook*, April 1993.

visibility-reducing particles. The Basin does meet the California standards for sulfates, hydrogen sulfide, and vinyl chloride, but does not meet the California standard for visibility. In addition, the Basin fails to meet the state standards for one-hour O₃, PM₁₀, and PM_{2.5}.

South Coast Air Quality Management District. SCAQMD has jurisdiction over an area of approximately 10,743 square miles. This area includes all of Orange County, all of Los Angeles County except for the Antelope Valley, the nondesert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The previously discussed Basin is a subregion of the SCAQMD jurisdiction.

The SCAQMD and the SCAG are responsible for preparing the Air Quality Management Plan (AQMP), which address federal and state CAA requirements. The AQMP details goals, policies, and programs for improving air quality and establishes thresholds for daily operation emissions. Environmental review of individual projects within the region must demonstrate whether daily construction and operation emissions thresholds established by the SCAQMD would be exceeded, and whether the project would increase the number or severity of existing air quality violations.

The SCAQMD adopted a comprehensive AQMP update, the 2003 AQMP for the Basin, on August 1, 2003.³ The 2003 AQMP outlines the air pollution control measures needed to meet federal health-based standards for O₃ and PM₁₀. It also demonstrates how the federal standard for CO, achieved for the first time at the end of 2002, will be maintained.⁴ This revision to the AQMP also addresses several state and federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes and new air quality modeling tools. The plan also takes a preliminary look at what will be needed to achieve new and more stringent health standards for O₃ and PM_{2.5}.

The SCAQMD has published a handbook (*CEQA Air Quality Handbook*, November 1993) that is intended to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts. This handbook provides standards, methodologies, and procedures for conducting air quality analyses in EIRs and was used extensively in the preparation of this analysis.

3B.3 Environmental Impacts and Mitigation Measures

Methodology

Regional construction emissions were compiled using URBEMIS 2002, which is an emissions estimation/evaluation model developed by the California Air Resources Board

³ SCAQMD, AQMD website, http://www.aqmd.gov/news1/aqmp_adopt.htm.

⁴ The Basin has technically met the CO standards since 2002, but the official attainment status has not been reclassified by the USEPA.

(CARB) that is based, in part, on SCAQMD *CEQA Air Quality Handbook* guidelines and methodologies. The URBEMIS 2002 software was also used to compile long-term project operational emissions from mobile sources (see Appendix B). Criteria pollutant emissions associated with the production and consumption of energy were calculated using emission factors from the SCAQMD's *CEQA Air Quality Handbook*. The analysis of roadway CO impacts followed the protocol recommended by Caltrans and published in the *Transportation Project-Level Carbon Monoxide Protocol*.⁵ It is also consistent with procedures identified through the SCAQMD's CO modeling protocol. The CO hotspot analysis worksheets and assumptions are presented in Appendix B.

Significance Criteria

The criteria used to determine the significance of an impact are based on the Initial Study Checklist in Appendix G of the *CEQA Guidelines*. One of the criteria was eliminated from further consideration because the proposed project would not be expected to create objectionable odors affecting a substantial number of people. This issue therefore, will not be discussed here. Please refer to the Initial Study (Appendix A) for further clarification.

The City of Long Beach has not developed specific thresholds for air quality impacts. However, because of the SCAQMD's regulatory role in the Basin, the significance thresholds and analysis methodologies in the SCAQMD's *CEQA Air Quality Handbook* were used in evaluating project impacts.

Construction. The project would result in a significant construction air quality impact if regional emissions exceed the significance thresholds set forth in **Table 3B.3**.

TABLE 3B.3
SCAQMD REGIONAL SIGNIFICANCE THRESHOLDS

| Air Contaminant | Construction (pounds per day) | Operations (pounds per day) |
|----------------------------|-------------------------------|-----------------------------|
| Carbon Monoxide | 550 | 550 |
| Nitrogen Oxides | 100 | 55 |
| Reactive Organic Compounds | 75 | 55 |
| Particulate Matter | 150 | 150 |

SOURCE: SCAQMD, *CEQA Air Quality Handbook*, 1993.

Operations. The project would result in a significant operational air quality impact if any of the following occur:

- Regional emissions exceed the significance thresholds set forth in Table 3B.3.

⁵ California Department of Transportation (Caltrans), *Transportation Project-Level Carbon Monoxide Protocol*, December 1997.

- Either of the following conditions would occur at an intersection or roadway within one-quarter mile of a sensitive receptor:
 - The proposed project causes an exceedance of the California one-hour or eight-hour CO standards of 20 or 9.0 ppm, respectively, at an intersection or roadway within one-quarter mile of a sensitive receptor; or
 - For intersection or roadways where existing CO levels exceed California standards, the incremental increase due to the project is equal to or greater than 1.0 ppm for the one-hour CO standard, or 0.45 ppm for the eight-hour CO standard.
- The project would not be compatible with SCAQMD, SCAG, or the City of Long Beach air quality policies.

Toxic Air Contaminants. The project would result in a significant operational air quality impact if any of the following occur:

- On-site stationary sources emit carcinogenic or toxic air contaminants that individually or cumulatively exceed the maximum individual cancer risk of ten in one million or an acute or chronic hazard index of 1.0.⁶
- Hazardous materials associated with on-site stationary sources result in an accidental release of air toxic emissions or acutely hazardous materials posing a threat to public health and safety.
- The project would be occupied primarily by sensitive individuals within one quarter mile of any existing facility that emits air toxic contaminants which could result in a health risk for pollutants identified in District Rule 1401.⁷

Project Impacts

Impact 3B.1: Could project construction result in temporary adverse impacts to regional ambient air quality?

Construction of the project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the project site. In addition, fugitive dust emissions would result from site preparation and construction activities. Mobile source emissions, primarily NO_x, would result from the use of construction equipment such as bulldozers, wheeled loaders, and cranes.

During the finishing phase, paving operations and the application of architectural coatings (i.e., paints) and other building materials would release reactive organic compounds. The assessment of construction air quality impacts considers each of these potential sources. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

⁶ SCAQMD, *Risk Assessment Procedures for Rules 1401 and 212*, November 1998.

⁷ SCAQMD, *CEQA Air Quality Handbook*, April 1993.

It is mandatory for all construction projects in the Basin to comply with SCAQMD Rule 403 for fugitive dust.⁸ Specific Rule 403 control requirements include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site, and maintaining effective cover over exposed areas. Compliance with Rule 403 would reduce regional PM₁₀ emissions associated with construction activities by 50 percent.

SCAQMD Rule 431.2 (Sulfur Content of Liquid Fuels) is also applicable to project construction.⁹ Rule 431.2 requires that after June 1, 2006, all diesel fuel produced or supplied for mobile equipment shall have a sulfur content of less than 15 ppm by weight. Low sulfur diesel with a sulfur content of less than 15 ppm by weight reduces NO_x exhaust emissions by approximately 50 percent.

Emissions for the regional construction air quality analysis were compiled using the URBEMIS 2002 emissions inventory model developed by CARB. The URBEMIS 2002 model separates the construction process into three stages. The first stage is building demolition with emissions resulting from demolition dust, debris haul truck trips, equipment exhaust, and worker travel. The second stage of construction is site grading with emissions resulting from fugitive dust, soil haul truck trips, equipment exhaust, and worker travel. The third stage is subdivided into building equipment, architectural coating, asphalt, and worker travel.

Emissions from the third stage include equipment exhaust from building construction and asphalt paving, reactive organic compounds (ROC) emissions from architectural coating and asphalt paving, and worker travel. The equipment mix and construction duration for each stage is detailed in Appendix B of this EIR.

Unmitigated daily construction-related regional emissions for the project are presented in **Table 3B.4**. As shown, maximum unmitigated regional emissions would exceed the SCAQMD daily significance thresholds for ROC and PM₁₀ but not for NO_x and CO.

Conclusion: The regional construction impact would be significant without incorporation of mitigation.

⁸ SCAQMD, *Rule 403 – Fugitive Dust*. April 2, 2004.

⁹ SCAQMD, *Rule 431.2 – Sulfur Content of Liquid Fuels*, September 15, 2000.

**TABLE 3B.4
UNMITIGATED CONSTRUCTION EMISSIONS**

| Phase | Estimated Emissions (lbs/day) | | | |
|---------------------------------|-------------------------------|-----------------|-----|------------------|
| | ROC | NO _x | CO | PM ₁₀ |
| Demolition | 18 | 73 | 142 | 27 |
| Site Preparation/Grading | 9 | 62 | 62 | 211 |
| Building Erection/Finishing | 295 | 46 | 140 | 4 |
| Maximum Regional Total | 295 | 73 | 142 | 211 |
| Regional Significance Threshold | 75 | 100 | 550 | 150 |
| Exceed Threshold? | Yes | No | No | Yes |

SOURCE: ESA, 2005.

Mitigation Measures

Prior to the issuance of any grading permit, SCAQMD Rule 403 and the following mitigation measures shall be included on the grading plans. In addition to SCAQMD Rule 403, the following mitigation measures are recommended to reduce ROC and PM₁₀ emissions and minimize public health impacts to nearby sensitive receptors.

Measure 3B.1: Water three times daily or non-toxic soil stabilizers shall be applied, according to manufacturers' specifications, as needed to reduce off-site transport of fugitive dust from all unpaved staging areas and unpaved road surfaces.

Measure 3B.2: All paved access roads, parking areas, and staging areas shall be swept daily using SCAQMD Rule 1186 certified water sweepers or recommended water sweepers using reclaimed water.

Measure 3B.3: Traffic speeds on unpaved roads shall be limited to 15 miles per hour (mph) or less.

Measure 3B.4: All construction equipment shall be properly tuned and maintained in accordance with manufacturer's specifications.

Measure 3B.5: General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues shall have their engines turned off when not in use, to reduce vehicle emissions. Construction activities shall be phased and scheduled to avoid emissions peaks and discontinued during second-stage smog alerts.

Measure 3B.6: To the extent possible, petroleum powered construction activity shall utilize electricity from power poles rather than temporary diesel power generators and/or gasoline power generators.

Measure 3B.7: Heavy-duty trucks shall be prohibited from idling in excess of five minutes.

Prior to the issuance of any building permit, the applicant shall demonstrate on the plans the following:

Measure 3B.8: Architectural coatings and solvents shall have an ROC content of 75 grams per liter or lower.

Measure 3B.9: The applicant shall utilize building materials that do not require painting, as feasible.

Measure 3B.10: The Applicant shall utilize pre-painted construction material, as feasible.

Significance After Mitigation: Mitigated construction emissions are presented in **Table 3B.5**. As shown, implementation of the above mitigation measures would reduce PM₁₀ emissions below the SCAQMD thresholds but not ROC emissions. Construction emissions would result in a significant impact.

**TABLE 3B.5
MITIGATED CONSTRUCTION EMISSIONS**

| Phase | Estimated Emissions (lbs/day) | | | |
|---------------------------------|-------------------------------|-----------------|-----|------------------|
| | ROC | NO _x | CO | PM ₁₀ |
| Demolition | 17 | 68 | 135 | 26 |
| Site Preparation/Grading | 8 | 60 | 59 | 136 |
| Building Erection/Finishing | 116 | 42 | 134 | 3 |
| Maximum Regional Total | 116 | 68 | 135 | 136 |
| Regional Significance Threshold | 75 | 100 | 550 | 150 |
| Exceed Threshold? | Yes | No | No | No |

SOURCE: ESA, 2005.

Impact 3B.2: Could project construction expose sensitive receptors to increased levels of toxic air contaminants?

The greatest potential for toxic air contaminant (TAC) emissions during construction would be diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the relatively short-term construction schedule of 22 months, the proposed project would not result in a long-term (i.e., 70-years) substantial source of TAC emissions with no residual emissions after construction and corresponding individual cancer risk.

Conclusion: Project-related toxic emission impacts during construction would not be significant.

Mitigation: None required.

Significance After Mitigation: Less than significant.

Impact 3B.3: Could project operations result in adverse impacts to regional ambient air quality?

Regional emissions associated with project operations would be generated by on-road vehicles and energy consumption. The project would generate approximately 354 net trips in the AM peak hour, 726 trips in the PM peak hour, and 885 trips in the weekend peak hour.¹⁰ Emissions associated with energy use would be generated by the consumption of electricity and natural gas. Regional operational emissions were estimated using the URBEMIS 2002 emissions inventory model. Weekday and weekend daily emissions are shown in **Tables 3B.6** and **3B.7**, respectively. As shown, weekday and weekend operational emissions would exceed the SCAQMD daily threshold for NO_x, ROC and CO.

**TABLE 3B.6
WEEKDAY OPERATIONAL EMISSIONS**

| Emissions Source | Estimated Emissions (lbs/day) | | | |
|---------------------------------|-------------------------------|-----------------|-----|------------------|
| | ROC | NO _x | CO | PM ₁₀ |
| On-Road Mobile Sources | 69 | 80 | 873 | 92 |
| Energy Consumption | <1 | 21 | 4 | <1 |
| Maximum Regional Total | 70 | 101 | 877 | 93 |
| Regional Significance Threshold | 55 | 55 | 550 | 150 |
| Exceed Threshold? | Yes | Yes | Yes | No |

SOURCE: ESA, 2006.

¹⁰ Meyer, Mohaddes Associates, *Seaport Marina Project Traffic Impact Report*, 2006.

**TABLE 3B.7
WEEKEND OPERATIONAL EMISSIONS**

| Emissions Source | Estimated Emissions (lbs/day) | | | |
|---------------------------------|-------------------------------|-----------------|-------|------------------|
| | ROC | NO _x | CO | PM ₁₀ |
| On-Road Mobile Sources | 85 | 99 | 1,094 | 115 |
| Energy Consumption | <1 | 21 | 4 | <1 |
| Maximum Regional Total | 86 | 120 | 1,098 | 116 |
| Regional Significance Threshold | 55 | 55 | 550 | 150 |
| Exceed Threshold? | Yes | Yes | Yes | No |

SOURCE: ESA, 2006.

Conclusion: The regional operational impact would be significant without incorporation of mitigation.

Mitigation Measures

The following mitigation measures are recommended to reduce operational NO_x, ROC and CO emissions:

Measure 3B.11: The applicant shall use light-colored roofing materials to deflect heat away from buildings.

Measure 3B.12: The applicant shall use double-paned windows to reduce thermal loss in buildings.

Measure 3B.13: The applicant shall install automatic lighting on/off controls and energy-efficient lighting, as feasible.

Measure 3B.14: The applicant shall install solar panels on roofs to supply electricity for home heating and cooling systems, as feasible.

Measure 3B.15: The project applicant shall ensure that construction contractors use architectural coatings limited to a VOC content of 75 grams per liter or less.

Measure 3B.16: CO, NO_x, ROC regional emissions associated with the operation of the proposed project was shown to exceed the threshold of significance.

The most significant reductions in regional and local air pollutant emissions are attainable through programs which reduce the vehicular travel associated with implementation of the proposed project. Support and compliance with the AQMP for the basin is the most important measure to achieve this goal. The AQMP includes improvement of mass transit facilities and implementation of vehicular usage reduction programs. Additionally, energy conservation measures are included.

To the greatest extent feasible, the following measures shall be incorporated into the project to minimize public health impacts to sensitive receptors:

Transportation Demand Management Measures (TDM):

- Provide adequate ingress and egress at all entrances to the proposed project site to minimize vehicle idling at curbsides.
- Provide dedicated turn lanes as appropriate and provide roadway improvements at heavily congested roadways. The areas where this measure would be applicable are the intersections in and near the project area. Presumably, these measures would improve traffic flow. Emissions would drop as a result of the higher traffic speeds.
- Employers should provide ride-matching, guaranteed ride home or car pool or van pool to employees as part of the TDM program and to comply with the AQMP Transportation Improvements TCM-01 measure.
- Employers should provide compensation, prizes or awards to ride-sharers.
- Provide preferential parking to high occupancy vehicles and shuttle services. Also, the project applicant shall designate additional car pool or van pool parking.
- Employers should provide variable work hours and telecommuting options to employees to comply with the AQMP Advanced Transportation Technology ATT-01 and ATT-02 measures. These measures allow employees to have compressed work weeks, flex-time, staggered work hours, or work out of their homes.
- Develop a trip reduction plan to comply with SCAQMD Rule 2202. SCAQMD Rule 2202 has revamped the requirements for car pooling. In general, mandatory car pooling is no longer required. Compliance with Rule 2202 will be mandatory.
- Schedule truck deliveries and pickups during off-peak hour traffic circulation. This will alleviate traffic congestion; therefore, emissions during peak hour will be lowered.

Energy Efficient Measures:

- Improve thermal integrity of the buildings and reduce thermal load with automated time clocks or occupant sensors. Reducing the need to heat or cool structures by improving thermal integrity will result in a reduced expenditure of energy and a reduction in pollutant emissions.
- Capture waste heat and re-employ it in non-residential buildings.
- Provide bicycle lanes, storage areas, and amenities, and ensure efficient parking management. This measure includes implementing the formation of bike clubs and providing additional bike racks, lockers, showers, bike repair areas, and loaner bikes. Also, provide lockers, showers, safe walk path maps, walk clubs and free walking shoes.
- Provide local shuttle and transit shelters, and ride-matching services.
- Synchronize traffic signals. The areas where this measure would be applicable are roadway intersections within the project area.

- Provide lighter color roofing and road materials and tree planning programs to comply with the AQMP Miscellaneous Sources MSC-01 measure. This measure reduces the need for cooling energy in the summer.
- Introduce window glazing, wall insulation, and efficient ventilation methods. The construction of buildings with features that minimize energy use is already required by the Uniform Building Code.

Significance After Mitigation: Regional operational emissions would still exceed the SCAQMD daily significance threshold for NO_x, CO and ROC after implementation of the above mitigation measures. Regional operational emissions would result in a significant impact.

Impact 3B.4: Could project operations result in adverse impacts to localized ambient air quality?

Project traffic would have the potential to create local area CO hotspots. The SCAQMD recommends a hot-spot evaluation of potential localized CO impacts when volume-to-capacity ratios are increased by two percent at intersections with a level of service (LOS) of D or worse. The SCAQMD also recommends a CO hot-spot evaluation when an intersection decreases in LOS by one level beginning when LOS changes from an LOS of C to D. Intersections were selected for analysis based on information provided in the Traffic Impact Report.¹¹

Local area CO concentrations were projected using the CALINE4 traffic pollutant dispersion model. The analysis of CO impacts followed the protocol recommended by the California Department of Transportation and published in the *Transportation Project-Level Carbon Monoxide Protocol*.¹² It is also consistent with procedures identified through the SCAQMD's CO modeling protocol, with all four corners of each intersection analyzed to determine whether proposed project development would result in a CO concentration that exceeds federal or state CO standards. As stated in the Protocol, receptor locations for the one-hour analysis were located three meters from each intersection corner and receptor locations for the eight-hour analysis were located seven meters from each intersection corner.

Multiple CO hotspot analyses were completed for the proposed project. **Table 3B.8** shows CO concentrations associated with weekday traffic and without the signal at the main project access on PCH. **Table 3B.9** shows CO concentrations associated with weekend traffic and without the signal at the main project access on PCH. Finally, **Table 3B.10** shows CO concentrations associated with weekday and weekend traffic and with the signal at the main project access on PCH.

¹¹ Meyer, Mohaddes Associates, *Seaport Marina Project Traffic Impact Report*, 2006.

¹² Caltrans, *Transportation Project-Level Carbon Monoxide Protocol*, December 1997.

**TABLE 3B.8
WEEKDAY CO DISPERSION ANALYSIS
NO SIGNAL AT MAIN PROJECT ACCESS AND PCH**

| Intersection | CO Concentration 2009 No Project Conditions (ppm) | CO Concentration 2009 With Project Conditions (ppm) | Significance Criteria (ppm) | Impact? |
|--|--|--|--|----------------|
| PCH and Bellflower Boulevard – PM peak hour | | | | |
| 1-hour concentration | 7.7 | 7.7 | 20 | No |
| 8-hour concentration | 5.7 | 5.7 | 9.0 | No |
| SR-22 eastbound on-ramp and Studebaker Road – PM peak hour | | | | |
| 1-hour concentration | 8.5 | 8.6 | 20 | No |
| 8-hour concentration | 6.3 | 6.3 | 9.0 | No |
| Loynes Drive and PCH – PM peak hour | | | | |
| 1-hour concentration | 7.6 | 7.7 | 20 | No |
| 8-hour concentration | 5.6 | 5.7 | 9.0 | No |
| Second Street and Livingstone Drive – PM peak hour | | | | |
| 1-hour concentration | 7.6 | 7.8 | 20 | No |
| 8-hour concentration | 5.6 | 5.8 | 9.0 | No |
| Second Street and Naples Drive – PM peak hour | | | | |
| 1-hour concentration | 8.2 | 8.2 | 20 | No |
| 8-hour concentration | 6.1 | 6.1 | 9.0 | No |
| Second Street and PCH – AM peak hour | | | | |
| 1-hour concentration | 8.8 | 9.0 | 20 | No |
| 8-hour concentration | 6.5 | 6.6 | 9.0 | No |
| Second Street and PCH – PM peak hour | | | | |
| 1-hour concentration | 9.9 | 10.3 | 20 | No |
| 8-hour concentration | 7.3 | 7.5 | 9.0 | No |
| Second Street and Studebaker Road – AM peak hour | | | | |
| 1-hour concentration | 9.7 | 9.8 | 20 | No |
| 8-hour concentration | 7.1 | 7.2 | 9.0 | No |
| Second Street and Studebaker Road – PM peak hour | | | | |
| 1-hour concentration | 9.9 | 10.0 | 20 | No |
| 8-hour concentration | 7.3 | 7.3 | 9.0 | No |
| Studebaker Road and PCH – PM peak hour | | | | |
| 1-hour concentration | 8.0 | 8.0 | 20 | No |
| 8-hour concentration | 5.9 | 5.9 | 9.0 | No |

SOURCE: ESA, 2006.

**TABLE 3B.9
WEEKEND CO DISPERSION ANALYSIS
NO SIGNAL AT MAIN PROJECT ACCESS AND PCH**

| Intersection | CO Concentration 2009 No Project Conditions (ppm) | CO Concentration 2009 With Project Conditions (ppm) | Significance Criteria (ppm) | Impact? |
|---|--|--|--|----------------|
| Anaheim Street and PCH | | | | |
| 1-hour concentration | 6.9 | 6.9 | 20 | No |
| 8-hour concentration | 5.2 | 5.2 | 9.0 | No |
| SR-22 westbound on-ramp and Studebaker Road | | | | |
| 1-hour concentration | 7.4 | 7.6 | 20 | No |
| 8-hour concentration | 5.5 | 5.6 | 9.0 | No |
| Loynes Drive and Studebaker Road | | | | |
| 1-hour concentration | 7.4 | 7.5 | 20 | No |
| 8-hour concentration | 5.5 | 5.6 | 9.0 | No |
| Loynes Drive and PCH | | | | |
| 1-hour concentration | 7.3 | 7.4 | 20 | No |
| 8-hour concentration | 5.4 | 5.5 | 9.0 | No |
| Second Street and Livingstone Drive | | | | |
| 1-hour concentration | 7.3 | 7.4 | 20 | No |
| 8-hour concentration | 5.4 | 5.5 | 9.0 | No |
| Second Street and PCH | | | | |
| 1-hour concentration | 9.2 | 9.6 | 20 | No |
| 8-hour concentration | 6.8 | 7.0 | 9.0 | No |
| Second Street and Shopkeeper Road | | | | |
| 1-hour concentration | 7.6 | 7.7 | 20 | No |
| 8-hour concentration | 5.6 | 5.7 | 9.0 | No |
| Second Street and Studebaker Road | | | | |
| 1-hour concentration | 9.5 | 9.6 | 20 | No |
| 8-hour concentration | 7.0 | 7.0 | 9.0 | No |
| Studebaker Road and PCH | | | | |
| 1-hour concentration | 7.4 | 7.4 | 20 | No |
| 8-hour concentration | 5.5 | 5.5 | 9.0 | No |

SOURCE: ESA, 2006.

As shown in Tables 3D.8 through 3D.10, future year (2009), including the project, CO concentrations would not exceed the state air quality standards. The project would not contribute to the formation of a CO hotspot and project operations would not expose sensitive receptors to substantial pollutant concentrations.

Conclusion: The impact would be less than significant.

Mitigation: None required.

Significance After Mitigation: Less than significant.

**TABLE 3B.10
WEEKDAY AND WEEKEND CO DISPERSION ANALYSIS
SIGNAL AT MAIN PROJECT ACCESS AND PCH**

| Intersection | CO Concentration 2009 No Project Conditions (ppm) | CO Concentration 2009 With Project Conditions (ppm) | Significance Criteria (ppm) | Impact? |
|---|--|--|--|----------------|
| Second Street and PCH – AM peak hour | | | | |
| 1-hour concentration | 8.8 | 8.8 | 20 | No |
| 8-hour concentration | 6.5 | 6.5 | 9.0 | No |
| Second Street and PCH – weekend peak hour | | | | |
| 1-hour concentration | 9.3 | 9.5 | 20 | No |
| 8-hour concentration | 6.8 | 7.0 | 9.0 | No |
| Studebaker Road and PCH – weekend peak hour | | | | |
| 1-hour concentration | 7.5 | 8.3 | 20 | No |
| 8-hour concentration | 5.6 | 6.1 | 9.0 | No |

SOURCE: ESA, 2005.

Impact 3B.5: Could project operations expose sensitive receptors to increased levels of toxic air contaminants?

The primary source of potential air toxics associated with proposed project operations include diesel particulates from delivery trucks (e.g., truck traffic on local streets and on-site truck idling). SCAQMD recommends that health risk assessments be conducted for substantial sources of diesel particulates (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.¹³ Potential localized air toxic impacts from on-site sources of diesel particulate emissions would be minimal since only a limited number of heavy-duty trucks (e.g., transportation refrigeration units) would access the project site and the trucks that do visit the site would not idle on the project site for extended periods of time. Based on the limited activity of the toxic air contaminant sources, the proposed project would not warrant the need for a health risk assessment associated with on-site activities, and, in this regard, potential air toxic impacts would be less than significant.

Typical sources of acutely and chronically hazardous toxic air contaminants include industrial manufacturing processes, automotive repair facilities, and dry cleaning facilities. The proposed project would not include any of these potential sources, although minimal emissions may result from the use of consumer products.

Conclusion: The proposed project would not release substantial amounts of toxic contaminants; and in this regard, no significant impact on human health would occur.

¹³ SCAQMD, *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions*, December 2002.

Mitigation: None required.

Significance After Mitigation: Less than significant.

Impact 3B.6: Could the project would be incompatible with SCAQMD, SCAG, and the City of Long Beach air quality policies?

The SCAQMD has designated two key indicators of consistency with air quality policies. The first criterion requires that the project not result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emission reductions specified in the AQMP. The second criterion requires that the project not exceed the assumptions made in preparing the AQMP.

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis include forecasts of project emissions in a regional context during construction and operation. These forecasts are provided earlier in this section. Since the consistency criteria identified under the first criterion pertain to pollutant concentrations, rather than to total regional emissions, an analysis of the proposed project's pollutant emissions on localized pollutant concentrations is used as the basis for evaluating project consistency.¹⁴

As previously indicated, CO has been identified as the preferred pollutant for assessing local area air quality impacts from motor vehicle operations. Based on the methodologies set forth by the SCAQMD, the measure of local area air quality impacts which indicates whether a project would cause or affect a violation of an air quality standard is the estimated CO concentrations at selected receptor locations located in close proximity to the project site. As previously discussed, no violations of the state CO standards are projected to occur as a result of project buildout. Thus, the project is consistent with the first criterion.

The second consistency criterion requires that the project does not exceed the assumptions in the AQMP. A project is consistent with the AQMP if it is consistent with the population, housing and employment assumptions which were used in the development of the AQMP. The 2003 AQMP, the most recent AQMP adopted by the SCAQMD, incorporates, in part, SCAG's 2001 Regional Transportation Plan (RTP) socioeconomic forecast projections of regional population and employment growth. The 2001 RTP is based on growth assumptions through 2020 developed by each of the cities' and counties' land use designations and zoning regulations in the SCAG region. All projects in the region contribute to regional pollution and the emissions associated with these projects are modeled by the SCAQMD to determine future air quality

¹⁴ SCAQMD, Personal Communication with Hemang Desai, September 16, 2005.

conditions. If pollutant concentrations are shown by the model to exceed state or federal ambient air quality standards, SCAQMD, SCAG, and CARB develop additional control strategies to offset emissions and reduce concentrations to a level below the standards. The project site is located in the Gateway Cities Council of Governments subregion of the SCAG. Gateway Cities Council of Governments growth forecasts have been incorporated into the 2020 SCAG projections.

Conclusion: The proposed project would be consistent with growth assumptions included in the AQMP and the impact would be less than significant.

Mitigation: None required.

Significance After Mitigation: Less than significant.

Cumulative Impacts

Impact 3B.7: Could project emissions result in an adverse impact to cumulative air quality?

Construction

The related projects include the development of hundreds of thousands of square feet of commercial and residential uses, a number that is many times greater than the project. As the project results in a significant impact during construction relative to ROC, it would contribute to a cumulatively considerable impact to ROC. SCAQMD thresholds are used to determine both project-specific impacts and whether or not a project's contribution to a cumulative impact is considerable.

Operation

The SCAQMD's approach for assessing cumulative operational impacts is based on the SCAQMD's AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and state CAAs. This forecast also takes into account SCAG's forecasted future regional growth. As such, the analysis of cumulative impacts focuses on determining whether the project is consistent with forecasted future regional growth. If a project is consistent with the regional population, housing and employment growth assumptions upon which the SCAQMD's AQMP is based, then future development would not impede the attainment of ambient air quality standards and a significant cumulative air quality impact would not occur. As presented in **Impact 3B.6**, the proposed project would be consistent with AQMP forecasts. However, the proposed project would result in a significant NO_x, CO and ROC impact during operations. SCAQMD thresholds are used to determine both project-specific impacts and whether or not a project's contribution to a cumulative impact is considerable. Therefore, the proposed project would result in a cumulatively

considerable regional operational impact given that the Basin is in non-attainment for ozone and the proposed project would exceed the regional daily emissions threshold for an ozone precursor (NO_x) and CO.

In addition, a localized CO impact analysis was conducted for cumulative traffic (i.e., related projects and ambient growth through 2009) (see Tables 3B.8 through 3B.10). This analysis indicates that no local CO violations would occur at any of the analyzed intersections. The project would not have a significant cumulative impact on localized air quality operations.

Conclusion: The proposed project would result in cumulatively considerable construction impacts with regard to ROC emissions. Similarly, the proposed project would result in a cumulatively considerable impact regarding NO_x and CO, ozone precursors. No significant impact would occur with regard to localized CO.

Mitigation: The mitigation measures presented under **Impacts 3B.1** and **3B.3** would reduce significant construction and operational emissions. No additional mitigation is reasonably available.

Significance After Mitigation: Cumulative ROC construction emissions and ROC, NO_x and CO operational emissions would exceed the SCAQMD daily significance thresholds after implementation of mitigation measures. The project would result in a significant and unavoidable cumulative impact.

3C. Cultural Resources

This section focuses on identifying impacts to archaeological and paleontological resources and provides information regarding the history and paleontological characteristics of the project assessment area.

An archival records search of the cultural resources files at the South Central Coast Information Center was conducted as part of this project and is included in Appendix E. The search included a review of all recorded archaeological sites within a ¼-mile radius of the project site as well as a review of cultural resource reports on file. In addition, the following historical listings were reviewed as part of the records search; the California Points of Historical Interest, the California Historical Landmarks, the California Register of Historic Places, the National Register of Historic Places (NRHP), the California State Historic Resources Inventory, and the County of Los Angeles Cultural Monuments.

3C.1 Environmental Setting

Paleontological Resources

Paleontology is a branch of geology that studies prehistoric life forms other than humans through the study of plant and animal fossils. Fossils are the remains of organisms that lived in the region in the geologic past and therefore preserve an aspect of southern California prehistory that is of scientific importance, since many species are now extinct.

Fossils are found embedded in geologic formations that range in thickness from a few feet to hundreds of feet. These formations form a complex relationship below the surface. Sedimentary formations are layered atop one another, and over time the layers have been squeezed, tilted, folded, and shaped by fault activity. Sensitive fossil bearing formations found at the surface also might extend from just below the surface to many miles below the surface. Consequently, the task of predicting paleontologically-sensitive areas is difficult.

Imported sediment and gravel currently underlie the project area. The imported fill has been placed on recent Quaternary Alluvium deposited along the course of the San Gabriel River that lies approximately ¼ mile east of the project area. Bedrock exposures within ½ mile of the project site are of the San Pedro Sands and Palos Verde Sands Formations and have produced occasional Pleistocene vertebrates.

Archaeological and Historic Resources

The project area is located within what was originally tidal marshland immediately inland from Alamitos Bay. The project area was within a coastal salt marsh biotic community, a narrow strip of tidal lagoon and salt marsh with low herbs and shrubs that included different types of plants, animals, and marine shellfish for prehistoric use. Coastal

strand, riparian woodland and coastal sage scrub biotic communities were also located near the project area. However, acorns were the primary food resource of the prehistoric human populations. Prehistoric settlements tended to be situated near bodies of water, including tidal marshes, to access marine food resources.

Prehistoric use of the Southern California region occurred as long as 10,000 years ago. The area prehistory has been divided into four major periods: Early Period (pre-5750 BC), Milling Stone Period (5750-3000 BC), Intermediate Period (3000 BC-AD 500), and Late Prehistoric Period (AD 500-1769). The Ethnographic Period, CA 1800, begins with the establishment of missions along the California coast. At that time, groups missionized into the Gabrielino Indians lived near the project area.

Historic Context

The first recorded contact between the Gabrielino and Europeans occurred in 1542 when the Cabrillo expedition arrived at Santa Catalina Island. In Orange County, the first recorded contact occurred in 1769 when the Portola expedition crossed the region. The historic era is divided into three periods: the Spanish Mission Period (1769-1821), the Mexican Rancho Period (1821-1848), and the American Period (post-1848).

The Spanish Mission period began at the time of the first European contact with the Gabrielinos in 1769. During this period, Franciscan Mission San Gabriel was established in 1771, the Mission San Juan Capistrano was established in 1776. The Franciscans' goal was to convert the Indians to Christianity and incorporate them into Spanish society.

In addition to the missions, the Spanish also established a town within Gabrielino territory, *El Pueblo de la Reina de Los Angeles de Porciuncula*, now known as Los Angeles. By the early 1800s, Spanish army officers and veterans living in California began receiving grants of land and establishing large, private grazing areas. The current project area is within the 300,000 acre Los Coyotes grant made to Manuel Perez Nieto in 1790.

The Mexican Rancho Period began in 1821, when Mexico gained independence from Spain. This period ended on February 2, 1848, when the United States formally obtained California from Mexico in the Treaty of Guadalupe Hidalgo. It was during this period that the various Mexican governors of *alta* California gave large tracts of land called *ranchos* to individuals who had worked in the service of the Mexican Government. In 1833, the Mexican government's Secularization Act changed missions into civil parishes, and natives associated with missions were to receive half of all mission possessions, including land. In reality, the Secularization Act usually resulted in the transfer of mission land to politically prominent individuals.

Manuel Nieto died in 1804, and in 1833 the *Los Coyotes* grant was divided into six smaller grants and given to Nieto's heirs. One of these smaller grants, *Los Alamitos*,

containing the current project area, was sold to Governor Figueroa in 1834. Following Figueroa's death in 1835, his brother, Francisco, managed *Los Alamitos*. It was then sold to Abel Stearns in 1842.

The American Period began in 1848 with the acquisition of California from Mexico. Abel Stearns was a cattle rancher who made money selling beef, which was in high demand during and immediately following the Gold Rush of 1849. The demand for beef declined in the mid-1850s. After a series of disastrous floods followed by several years of drought, Stearns lost *Rancho Los Alamitos* through foreclosure. The rancho was leased to various individuals and in 1878 was purchased by John Bixby, I. Hellman and Jotham Bixby. The portion of the rancho where the current project area is located was inherited by John Bixby's family after his death and was further subdivided. John's son, Fred, managed *Rancho Los Alamitos* from 1898 until his death in 1952. In 1968, Fred Bixby's heirs, recognizing the historical importance of Rancho Los Alamitos, deeded the hilltop residence and grounds north of the current project area to the City of Long Beach as a public historic place. The project site was developed in the 1930s from reclaimed marshlands adjacent to Los Alamitos Bay, immediately southwest from the project site.

Around 1932, the City of Long Beach allocated \$77,000 in oil money to pay for the widening and straightening of Los Alamitos Bay for the construction of the Marine Stadium, located on Appian Way between Second Street and Colorado Street, and ancillary facilities. It was constructed so that the City of Long Beach could host the 10th Olympiad rowing competition. The Marine Stadium was the first human made water course ever constructed for the Olympic Games. Along with the Los Angeles Coliseum, the stadium is one of the few sites constructed for the 1932 games that remains in existence today. The games took place in Los Angeles from July 30 to August 14, with the rowing events held at the Long Beach Marine Stadium from August 9 to 11.¹ It was also the site for the 1968, 1976, and 1984 Olympic rowing trials and was an Olympic Training Center. Over the past 70 years, it has been used as a training facility for the crews of California State University Long Beach and the Long Beach Rowing Association.²

The Long Beach Marine Stadium is listed in the California Register of Historic Places as being located within a quarter mile radius of the project site. In addition, the City of Long Beach passed a City Council resolution in 1994 designating the Marine Stadium a California Historical Landmark.³

Project Site

The project site is developed with the Seaport Marina Hotel and associated surface parking that were constructed in 1963. This facility has not been identified as a historic

¹ The United States rowing team, represented by the UC Berkeley varsity crew (Cal Crew), won the bronze medal, with the Italians taking the gold.

² South Central Coast Information Center, 2005.

³ *Ibid.*

resource in the record search prepared for this project. Buildings or structures that qualify as historic resources are typically 45 years old or older,⁴ and/or have strong associations with a significant historical event, individual, and/or possess high architectural values. The hotel would not qualify as a historic resource due to its relatively recent date of construction (43 years old as of 2006), no known association with historic persons or events, and no distinguishing architectural style. The hotel and associated parking lot on the project site would not be considered a historic resource for CEQA review purposes.

3C.2 Regulatory Background

Federal

The National Historic Preservation Act (NHPA) expanded the scope of the act to include important state and local resources. Provisions of NHPA establish the NRHP maintained by the National Park Service, the Advisory Council on Historic Preservation, State Historic Preservation Offices, and grants-in-aid programs. Section 106 of the NHPA requires all federal agencies to consult the Advisory Council on Historic Preservation before continuing any activity affecting a property listed on, or eligible for listing on the NRHP. The Advisory Council has developed guidelines for compliance with Section 106 to encourage coordination between lead agencies and cultural resource agencies.

State

State Office of Historic Preservation

The Office of Historic Preservation (OHP) implements preservation laws regarding historic resources, and is responsible for the California Historic Resources Inventory (CHRI), which uses the National Criteria for listing resources significant at the national, state, and local level.

Native American Heritage Commission

Section 50907.9 of the Public Resource Code and Section 7050 of the Health and Safety Code empower the Native American Heritage Commission (NAHC) to regulate Native American concerns toward the excavation and disposition of Native American cultural resources. Among its duties, the NAHC is authorized to resolve disputes relating to the treatment and disposition of Native American human remains and items associated with burials. Upon notification of the discovery of human remains by a county coroner, the NAHC notifies the Native American group or individual most likely descended from the deceased.

⁴ Some buildings or structures that were built within the last 45 years may qualify for listing in the NR if they meet the criteria for exceptional historical significance, however, these resources are extremely rare.

3C.3 Environmental Impacts and Mitigation Measures

Methodology

Information for cultural resources comes from data obtained from an archival research conducted at the South Central Coastal Archaeological Information Center at California State University, Fullerton.

Significance Criteria

The criteria used to determine the significance of an impact are based on the Initial Study Checklist in Appendix G of the *CEQA Guidelines* and City precedent. The criteria regarding historical resources was eliminated from further consideration, because the existing Seaport Marina Hotel is less than 45 years old and does not represent a significant style or period in California history. Therefore this issue will not be discussed here. Please refer to the Initial Study (Appendix A) for further clarification.

For this analysis, the proposed project may result in significant impacts if it would:

- Cause a substantial adverse change in the significance of a unique archaeological resource;
- Disturb any human remains, including those interred outside of formal cemeteries; or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Project Impacts

Impact 3C.1: Could implementation of the proposed project disturb previously unknown prehistoric archaeological resources and human remains?

No recorded archaeological sites or human remains are located on the project site or within ¼ mile from the project site. The area has been highly disturbed by recent human activities, including filling of the tidal marshlands which once encircled Los Alamitos Bay, reducing the potential to encounter archaeological resources during project excavation. However, because the project area was originally tidal marshland where prehistoric settlements tended to be situated, there is some potential for buried and previously unrecorded prehistoric resources to be encountered during excavation activities. In addition, there exists the possibility that human remains may be encountered during excavation activities, although unlikely. To reduce the potential to disturb previously unknown prehistoric archaeological resources and human remains, mitigation measures would be incorporated into the project to reduce impacts to less than significant.

Conclusion: Implementation of the proposed project with incorporation of mitigation measures would have a less than significant impact on previously unknown prehistoric archaeological resources and human remains.

Mitigation Measures

Measure 3C.1: If archaeological resources, such as chipped or ground stone, dark or friable soil, large quantities of shell, historic debris, or human bone, are inadvertently discovered during ground disturbing activities, no further construction shall be permitted within 250 feet of the find until the City of Long Beach has been notified and a qualified archaeologist can be secured to determine if the resources are significant per the Criteria of Eligibility in the NRHP regulations (36 CFR 60.4) and the California Register of Historical Resources eligibility criteria (Public Resources Code Section 5024.1; Title 14 CCR Section 4852). If the archaeologist determines that the find does not meet these standards of significance, construction shall proceed.

If the archaeologist determines that further information is needed to evaluate significance, the City of Long Beach shall be notified and a data recovery plan shall be prepared.

The Data Recovery Plan shall delineate a plan and timetable for evaluating the find. The plan shall also emphasize the avoidance, if possible, of significant impacts to archaeological resources. If avoidance or preservation is not possible, the acquisition of data from the site or salvage through excavation that produces qualitative and quantitative data sets of scientific value may be considered an effective mitigation measure damage to or destruction of the deposit or components of it (Public Resources Code Section 21083.2(d)). Upon approval of this Plan by the City staff, the plan shall be implemented prior to reactivation of any project activities within 250 feet of the resources' boundary.

Measure 3C.2: If human remains are encountered, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the county coroner has made a determination of the origin and disposition of the remains pursuant to Public Resources Code Section 5097.98. The county coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner shall notify the NAHC, which shall determine and notify a most likely descendant (MLD). With the permission of the landowner or an authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of the human remains and items associated with Native American burials.

Significance After Mitigation: Less than significant.

Impact 3C.2: Could construction activities disturb previously unknown paleontological resources?

The project site is located within an area of recent Quaternary alluvial sediment brought to the area by the San Gabriel River and surrounded by bedrock exposures of Late Pleistocene sediments of the San Pedro and Palos Verde Sands deposits, known to produce limited vertebrate fossils. It is unlikely that *in situ* deposits of fossiliferous sediments would be encountered during project construction. However, there is a potential to encounter unknown paleontological resources during excavation activities. A mitigation measure is recommended to reduce potential impacts with regard to paleontological resources.

Conclusion: With incorporation of mitigation measures, construction activities associated with the proposed project would have a less than significant impact on previously unknown paleontological resources.

Mitigation Measure

Measure 3C.3: Prior to the issuance of any grading permit, the applicant shall provide documentation that a paleontologist who is listed on the County of Los Angeles list of certified paleontologists has been retained and shall be on-site during all rough grading and other significant ground disturbing activities in paleontologically sensitive sediments. This requirement shall be verified by the Director of Planning and Building or their designee.

In the event that fossil resources are noted within the project area, construction in the vicinity of the find shall be halted until the discovery can be evaluated. If the discovery is determined to be important, the project proponent shall initiate a paleontological recovery program to collect the fossil specimens and all relevant lithologic and locality information about the specimen. This may include the collection and the washing and picking of up to 6,000 pounds per locality of mass samples to recover small invertebrate and vertebrate fossils.

The results of the fossil recovery program shall be documented in a technical report that includes an itemized inventory of specimens. Specimens recovered during grading activities shall be prepared to a point of identification and permanent preservation. All recovered fossils shall be placed within a museum repository that is capable of accepting the recovered fossils and that has a permanent retrievable storage. The project proponent shall be responsible for all costs associated with this recovery program and report preparation.

Significance After Mitigation: Less than significant.

Cumulative Impacts

Impact 3C.3: Together with other area projects, could the proposed project have cumulative impacts on cultural resources in the proposed project area?

Impacts on cultural resources are generally localized and do not affect the immediate vicinity surrounding the proposed project site. Impacts to cultural resources resulting from construction and operation of the proposed project are not anticipated to result in cumulative impacts.

Conclusion: The proposed project would not contribute to cumulative impacts on cultural resources in the project area.

Mitigation: None required.

Significance After Mitigation: Less than significant.

3D. Geology and Soils

The purpose of this section is to evaluate the proposed project's impacts on local geological features and whether it would expose people or structures to adverse geological impacts. Potential geologic hazards include seismically induced groundshaking, fault rupture, liquefaction, landsliding, and weak or unstable soil conditions. The following geology and soils information is based on the *Geotechnical Investigation Report* (Converse Consultants, 2005). Copies of this document are available for review at the City.

3D.1 Environmental Setting

Surface Conditions

The relatively level site is approximately 10.9-acres and is primarily developed as the Seaport Marina Hotel, with a night club, an Enterprise Car Rental, and The Elks Club as tenants. The rest of the site is covered with asphalt concrete and is used for vehicle parking. A parcel of the project site is an empty lot that was a former 76 (Unocal) service station. A small area of the project site is landscaped. It is assumed that all existing structures have shallow foundations less than five feet in depth.

The site was used to extract oil during 1926 through 1968. Five abandoned Chevron oil wells exist at the site. A petroleum pipeline, operated by Chevron as well as several others, exists along the north boundary of the site. Numerous groundwater monitoring wells and extraction wells exist in the area of a former service station at the northeast corner of the site.

Subsurface Conditions

The site is located within the Long Beach Plain that is primarily composed of recent fine-grained alluvial deposits and Pleistocene marine deposits. Fill material ranging from 0.5 to 2.5 feet below ground surface was encountered at the site. A slight oil odor was observed at borings within five to ten feet below ground surface. Section 3E. Hazards, describes conditions related to previous oil production at the project site in greater detail. Thicker fill might be encountered under the existing buildings or other areas of the site. The fill materials were likely associated with construction of existing buildings and mainly consist of silty sand and sandy silt. Alluvial deposits underlie the fill material to the maximum explored depth of 81.5 below ground surface. The alluvial deposits within the project site generally consist of silty sand, sandy silt, clay, clayey sand, and sand with silt.

Geologic Hazards

Regional Faults

The site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone. The two nearest such Alquist-Priolo Fault Zones presently designated by the State of California are along the surface traces of the Newport-Inglewood Structural Zone located approximately 0.5 mile northeast of the site and the Palos Verde fault, located approximately 7.7 miles to the southwest of the site. **Figure 3D.1** illustrates the approximate position of these two active faults, as well as other active and potentially active faults of significance to the site. **Figure 3D.2** shows the surface traces of the Newport-Inglewood Structural Zone with respect to the site.

The numerous faults in Southern California include active, potentially active, and inactive faults. The criteria for these major groups are based on criteria developed by the California Division of Mines and Geology (CDMG) for the Alquist-Priolo Earthquake Fault Zoning Program.¹ By definition, an active fault is one that has had surface displacement within Holocene time (about the last 11,000 years). A potentially active fault is a fault that has demonstrated surface displacement of Quaternary age deposits (last 1.6 million years). Inactive faults have not moved in the last 1.6 million years. A list of nearby active faults and the distance in miles between the nearest point on the fault and the project site, the moment magnitude of the maximum credible earthquake, and the slip rate for the fault is given in **Table 3D.1**.

TABLE 3D.1
MAJOR NAMED FAULTS CONSIDERED TO BE ACTIVE IN SOUTHERN CALIFORNIA

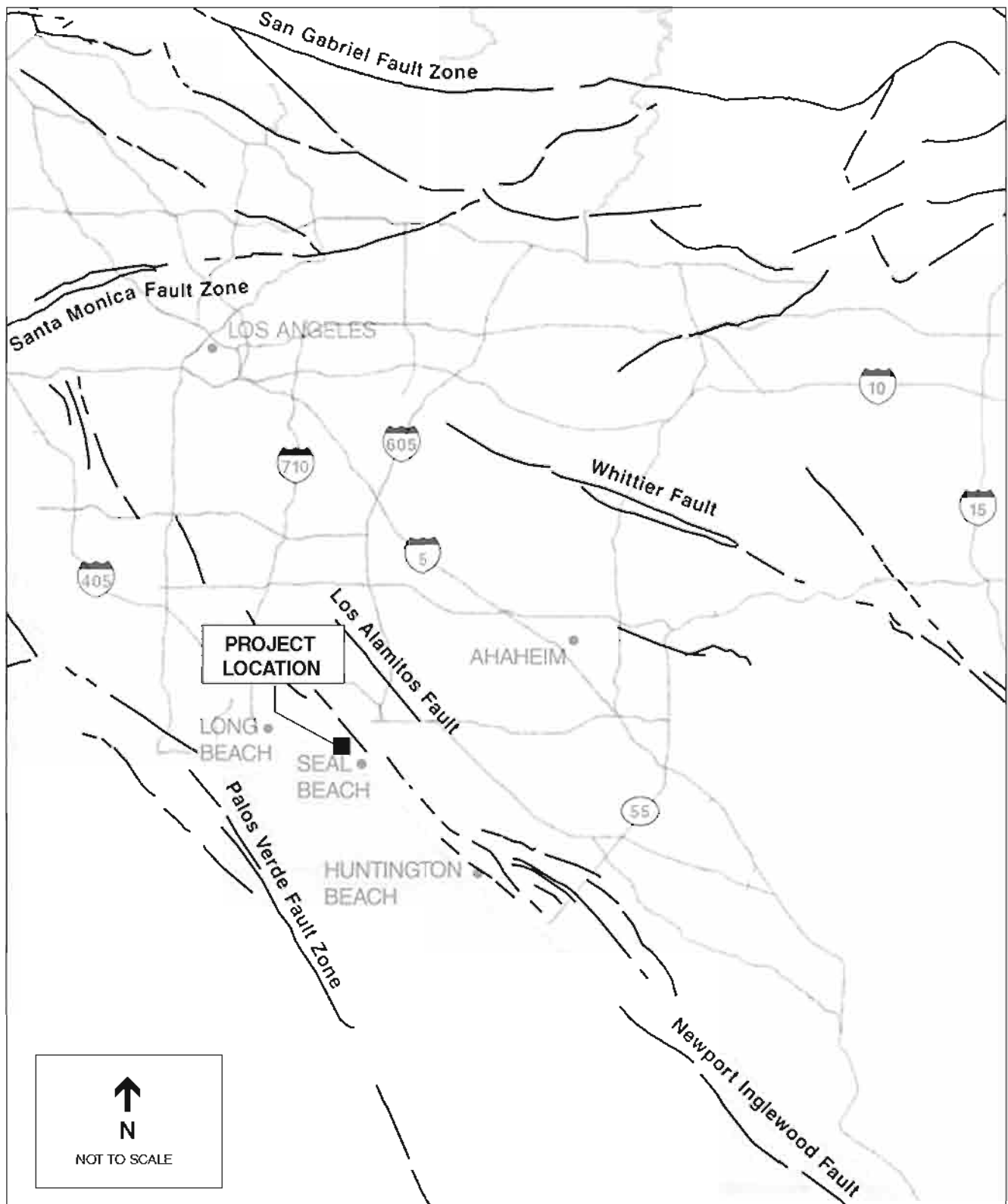
| Fault (in increasing distance) | Magnitude (Maximum Credible Earthquake) | Slip Rate (mm/yr) | Distance From Site (miles) |
|--------------------------------|---|----------------------|-------------------------------|
| Newport-Inglewood (L.A. Basin) | 6.9 | 1.0 | 0.5 |
| Palos Verdes | 7.1 | 3.0 | 13 |
| Newport-Inglewood (offshore) | 6.9 | 2.0 | 15 |
| Elsinore-Whittier | 6.8 | 5.0 | 2.5 |

SOURCE: Converse Consultants, *Geotechnical Investigation Report*, 2005.

Seismicity

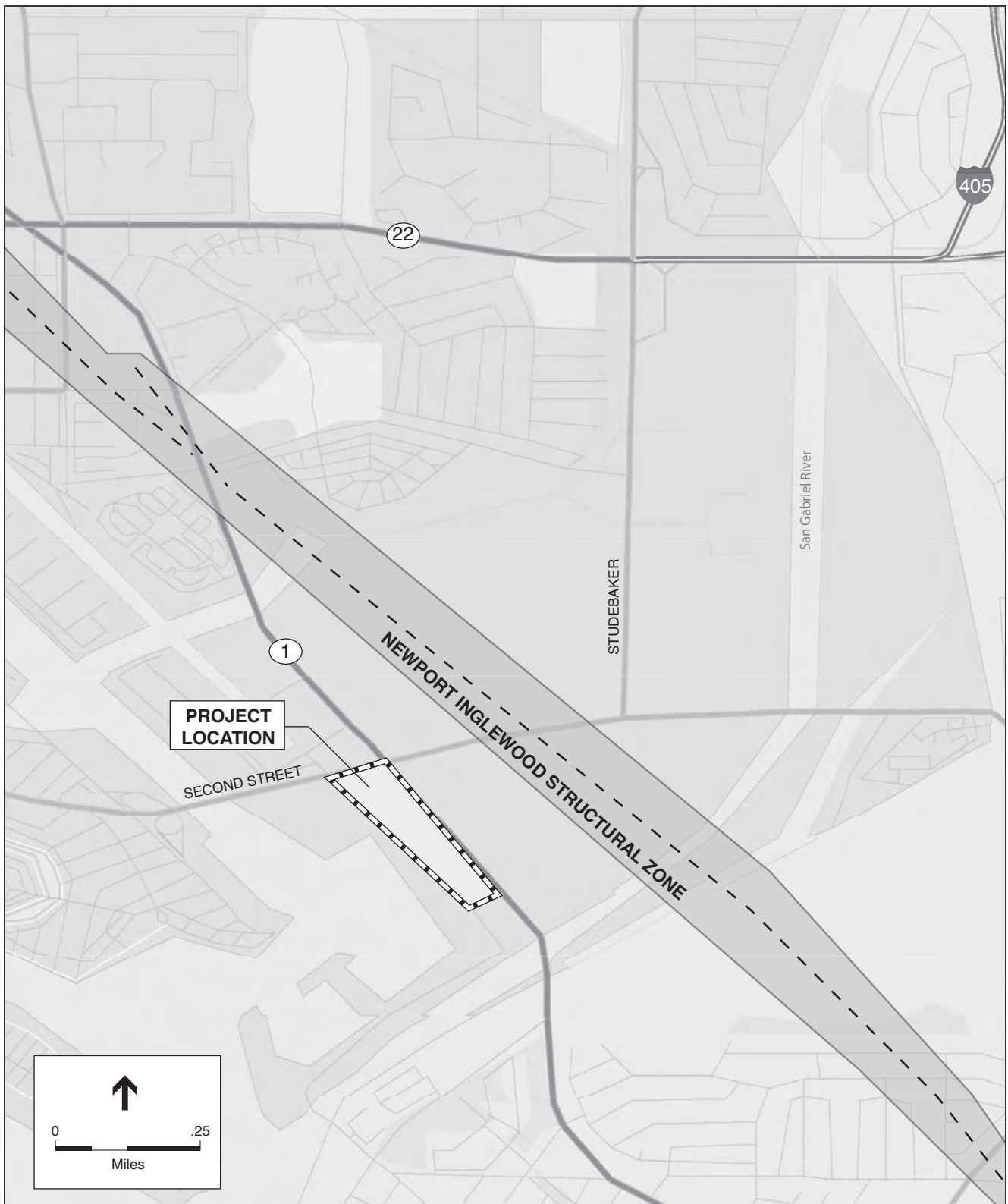
Several earthquakes of moderate (magnitude 6.0 to 6.9) to large (magnitude 7.0 to 7.9) magnitude have occurred in the Southern California area within the last 70-years. A list of these historic earthquakes is included in **Table 3D.2**.

¹ Hart, E.W., 1973, "Fault-Rupture Hazard Zones in California," *California Division of Mines and Geology Special Publication 42*, revised 1997.



SOURCE: USGS; ESA, 2005.

Long Beach Marina EIR . 204452
Figure 3D.1
Potential Seismic Sources



SOURCE: Geoscience; ESA, 2005.

Long Beach Marina EIR . 204452
Figure 3D.2
Earthquake Fault Hazard Zone Map

TABLE 3D. 2
LIST OF HISTORIC EARTHQUAKES

| Earthquake (In Chronological Order) | Date of Earthquake | Magnitude | Distance to Epicenter from Site (miles) | Direction to Epicenter |
|--|---------------------------|------------------|--|-----------------------------------|
| Long Beach | March 11, 1933 | 6.4 | 13 | SE |
| Kern County | July 21, 1952 | 7.5 | 80 | NW |
| San Fernando | February 9, 1971 | 6.6 | 24 | N |
| Whittier Narrows | October 1, 1987 | 5.9 | 18 | E |
| Sierra Madre | June 28, 1991 | 5.8 | 27 | NW |
| Landers | June 28, 1992 | 7.5 | 110 | E |
| Big Bear | June 28, 1992 | 6.6 | 90 | E |
| Northridge | January 17, 1994 | 6.7 | 34 | NW |
| Hector Mine | October 16, 1999 | 7.1 | 128 | NE |

SOURCE: California Institute of Technology, earthquake data from 1932-2005.

Liquefaction

Liquefaction is the process in which loose granular soils below the groundwater table temporarily lose strength during strong ground shaking as a consequence of increased pore pressure and reduced effective stress.² The vast majority of liquefaction hazards are associated with sandy soils and silty soils of low plasticity.³ Potentially liquefiable soils (based on composition) must be saturated or nearly saturated to be susceptible to liquefaction.⁴

Significant factors that affect liquefaction include water level, soil type, particle size and gradation, relative density, confining pressure, intensity of shaking, and duration of shaking. Liquefaction potential has been found to be the greatest where the groundwater level is shallow and submerged loose, fine sands occur within a depth of about 50 feet or less. Liquefaction potential decreases with increasing grain size and clay and gravel content, but increases as the ground acceleration and duration of shaking increase.

Seismic Hazard Zone Maps indicate that the proposed project site is located within the liquefaction zone. Due to shallow groundwater, anticipated ground acceleration, and isolated layers of low to medium dense sandy soils, the proposed project site is considered susceptible to liquefaction.⁵

² Applied Technology Council, *Liquefaction Maps*, ATC Tech Brief 1, funded by the U. S. Geological Survey as part of the ATC-35 Research Utilization Development, 1996; Sommerville, S. H. and Paul, M. A., *Dictionary of Geotechnics*, 1983.

³ California Division of Mines and Geology, "Guidelines for Evaluating and Mitigating Seismic Hazards in California," *Special Publication 117*, 1997.

⁴ *Ibid.*

⁵ Converse Consultants, *Geotechnical Investigation Report, Mixed-Use Community—Seaport Marina*, September 1, 2005.

Seismically-Induced Settlement

Seismically-induced settlement and differential compaction often occurs when loose to medium dense granular soils densify during ground shaking. If such settlement were uniform beneath a given structure, damage would be minimal. However, due to variations in distribution, density, and confining conditions of the soils, such settlement is generally non-uniform and can cause serious structural damage. Seismically-induced settlement can occur in both dry and partially saturated granular soils, as well as in saturated granular soils.

According to the geotechnical report, due to the depth at which the liquefaction is expected to occur, there could be surface expressions of the liquefaction in the form of sand boils and settlement could occur over a large area. As a result, the anticipated settlement of individual structures would be predominantly the same for each structure with moderate amounts of differential settlement for each structure.⁶

3D.2 Regulatory Background

State

Alquist-Priolo Earthquake Fault Zones

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 requires that special geologic studies be conducted to locate and assess any active fault traces in and around known active fault areas prior to development of structures for human occupancy. This law was a direct result of the 1971 San Fernando Earthquake, which was associated with extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures.

The Alquist-Priolo Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. This act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. The law requires the State Geologist to establish regulatory zones (Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps. These maps (Alquist-Priolo Maps) are distributed to all affected cities, counties and state agencies for their use in planning and controlling new or renewed construction. Local cities and counties must regulate certain development projects within the zones that include withholding permits until geologic investigations demonstrate that development sites are not threatened by future surface displacement. Projects include all land divisions and most structures for human occupancy.

⁶ Converse Consultants, *Geotechnical Investigation Report, Mixed-Use Community—Seaport Marina*, September 1, 2005.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides. The purpose of the act is to protect public safety from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and other hazards caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. Before a development permit is granted for a site within a seismic hazard zone, a geotechnical investigation of the site has to be conducted and appropriate mitigation measures incorporated into the project design. Seismic Hazard maps have been completed for much of the southern California region.

California Building Code

The California Building Code (CBC) is codified in the California Code of Regulations (CCR), Title 24, Part 2 that incorporates the California Building Standards Code. Title 24 is assigned to the California Building Standards Commission that, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable.⁷ Published by the International Conference of Building Officials, the Uniform Building Code (UBC) is a widely adopted model building code in the United States. The California Building Code incorporates (by reference) the UBC with necessary California amendments. About one-third of the text within the CBC has been tailored for California earthquake conditions.

Local

As part of the General Plan, the City of Long Beach developed a Seismic Safety Element that identifies goals to minimize the loss of life, property damage, and disruption of goods and services from man-made and natural disasters including floods, fires, non-seismic geologic hazards and earthquakes. The Seismic Safety Element of the City of Long Beach General Plan (adopted in October 1988) addresses general geologic hazards in addition to other hazardous events mentioned above that the proposed project might be subject.

The purpose of this element is to provide a comprehensive analysis of seismic factors in order to reduce the loss of life, injuries, damage to property and social and economic impacts resulting from future earthquakes. The Seismic Safety Element includes goals and recommendations that provide guidance for development in seismically active areas. Specifically, the Element contains goals such as: (1) reducing public exposure to seismic risks; (2) providing an urban environment which is as safe as possible from

⁷ Bolt, B., *Earthquakes*, W. H. Freeman and Company, New York, New York, 1988.

seismic risk; and (3) providing the maximum feasible level of seismic safety protection services.⁸

3D.3 Environmental Impacts and Mitigation Measures

Methodology

This section addresses the potential for structural damage to occur due to the local geology underlying the proposed project site, as well as slope instability, ground settlement, unstable soil conditions, and regional seismic conditions.

Geologic/geotechnical conditions affecting the site are summarized from compiled information and analyses, including referenced documents/publications and a site-specific *Geotechnical Investigation Report* prepared for the project.

Significance Criteria

The criteria used to determine the significance of an impact are based on the Initial Study Checklist in Appendix G of the *CEQA Guidelines* and City precedent. Several criteria were eliminated from further consideration because the project site: (1) is not located within an Alquist-Priolo Earthquake Zone and would not cause a substantial increase in the number of people or structures exposed to seismic risk; (2) is relatively flat and there are no hillsides or slopes on or adjacent to the site that would be susceptible to slope failure or landslide; (3) has a low potential for expansive soils; and (4) no septic tanks or alternative wastewater disposal systems are proposed for the project.

These issues, therefore will not be discussed here. Please refer to the Initial Study (Appendix A) for further clarification.

For this analysis, the proposed project may result in significant impacts if it would:

- Expose people or structures to potential substantial adverse affects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.
- Result in substantial soil erosion or the loss of topsoil; or
- Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

⁸ City of Long Beach, Department of Planning and Building, *Seismic Safety Element of the Long Beach General Plan*, October 1988.

Project Impacts

Impact 3D.1: Could implementation of the proposed project expose people or structures to potential substantial adverse affects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

The liquefaction analysis was conducted for site conditions below grade surface before the excavation and the site soil below the two-story subterranean garage floor after excavation of 25 feet of soil. Calculations indicate that during the maximum probable earthquake (10 percent in 50 years), liquefaction would occur on the site between the depths of 10 and 40 feet below grade surface. Based on the limited available information, liquefaction is expected to be general in nature and occur over the entire site.⁹

According to the geotechnical report, the potential for settlement resulting from liquefaction at the project site would be moderate.¹⁰ Therefore, the proposed development could expose people to significant impacts related to seismic settlement. Potential hazards related to liquefaction can be reduced to a less than significant level with proper engineering design.

Prior to excavation, the total potential seismically induced settlement on the project site could range from 6.5 inches to 8.3 inches. Considering 25 feet over excavation, the total seismically-induced settlement on the project site could range from 2.6 inches to 5.7 inches; the differential settlement is assumed to be half of the total settlement.¹¹ As a result, the anticipated settlement of individual structures would be predominantly the same for each structure with moderate amounts of differential settlement for each structure.¹² Mitigation measures would be incorporated into the project to reduce liquefaction and settlement impacts.

Conclusion: Implementation of the proposed project with incorporation of mitigation measures and proper engineering design would not contribute to exposing people or structures to potential substantial adverse effects involving seismic-related ground failure, including liquefaction.

Mitigation Measures

Measure 3D.1: Prior to the issuance of any building permits, the applicant shall demonstrate on the final site drawings that earthquake-resistant design has been incorporated into the drawings in accordance with the most current California Building Code and the recommended seismic design parameters of the Structural Engineers Association of California. Demonstration shall be to the satisfaction of the Director of Planning and Building or their designee. Ultimate site seismic

⁹ Converse Consultants, *Geotechnical Investigation Report, Mixed-Use Community—Seaport Marina*, September 1, 2005.

¹⁰ *Ibid.*

¹¹ *Ibid.*

¹² *Ibid.*

design acceleration shall be determined by the project structural engineer during the project design phase.

Measure 3D.2: Prior to the issuance of any building permit, the applicant shall demonstrate that the design and construction of the proposed structures include methods for densifying and thus increasing the strength of loose, liquefaction susceptible soils at depth, such as columns and compaction grouting, as specified in the geotechnical report. Demonstration shall be to the satisfaction of the Director of Planning and Building or their designee.

Measure 3D.3: Prior to the issuance of any grading permit, the applicant shall demonstrate on the final grading plans that where the planned depth of excavation does not extend below the existing fill soils, the existing fill soils shall be removed and recompacted in accordance with the requirements of the appropriate governmental agencies.

Measure 3D.4: Prior to the issuance of any grading permit, the applicant shall demonstrate on the final grading plans that a temporary shoring system with lagging shall be required during project excavation.

Measure 3D.5: Prior to the issuance of any grading permit, the applicant shall demonstrate on the final grading plans that temporary and permanent retaining walls shall be designed for the recommended lateral earth pressures and shall be provided with a good drainage system.

Measure 3D.6: Prior to the issuance of any grading permit, the applicant shall demonstrate on the final grading plans that a registered geotechnical engineer shall be present on-site to observe grading operations and foundation excavations.

Measure 3D.7: Prior to the issuance of any grading permit, the applicant shall demonstrate on the final grading plans that on-site grading shall be performed in such a manner that alteration of stormwater runoff or erosion of graded areas would not occur. All areas of construction shall be fine-graded to direct water away from foundation and basement areas and direct water to the nearest available storm drain or to the street. Runoff at the project site shall not be allowed to flow in an uncontrolled manner, especially over any permanent or temporary slopes.

Measure 3D.8: Prior to the issuance of any grading permit, the applicant shall demonstrate on the final grading plans that where there is sufficient space for sloped excavations, temporary cut slopes may be made according to the recommendations of the geotechnical report. However, the stability of the graded slopes shall be addressed when grading plans are completed for the proposed development. Vertical excavations heights shall be in accordance with the geotechnical investigation recommendations.

Measure 3D.9: Prior to the issuance of any grading permit, the applicant shall demonstrate on the final grading plans that if temporary excavation slopes are to be maintained during the rainy season, all drainage shall be directed away from the top of the slope. No water shall be allowed to flow uncontrolled over the face of any temporary or permanent slope.

Measure 3D.10: Prior to the issuance of any grading permit, the applicant shall demonstrate on the final grading plans that water shall not be allowed to pond at the top of the excavation or allowed to flow into the excavation.

Measure 3D.11: Prior to the issuance of any grading permit, the applicant shall demonstrate on the final grading plans that where sufficient space for sloped excavations is not available, shoring shall be used. The shoring system may consist of soldier piles and lagging.

Measure 3D.12: Prior to the issuance of any grading permit, the applicant shall demonstrate on the final grading plans that final shoring plans, specifications, and designs for walls below grade shall be reviewed and approved by a geotechnical engineer.

Measure 3D.13: Prior to the issuance of any grading permit, the applicant shall demonstrate on the final grading plans that a drainage system shall be placed at the bases of building walls below grade.

Significance After Mitigation: Less than significant.

Impact 3D.2: Could the proposed project be subject to substantial soil erosion or the loss of topsoil?

The proposed project would not significantly alter the existing topography within the project area. Currently, the project site is relatively flat, and the final grading of the project site would not significantly differ from the existing grade. Therefore, the operation of the proposed project would not result in substantial erosion or loss of topsoil.

Construction activities associated with the proposed project could impact water quality due to sheet erosion of exposed soils and subsequent deposition of particles and pollutants in drainage areas. Grading in particular, could lead to exposed areas of loose soil, as well as sediment stockpiles that are susceptible to uncontrolled sheet flow. Incorporation of the mitigation would reduce impacts associated with soil erosion during project construction.

Conclusion: The proposed project with incorporation of mitigation would have a less than significant impact on soil erosion and the loss of topsoil.

Mitigation Measure

Measure 3D.14: Prior to the issuance of any grading permit, the applicant shall have an approved Water Quality Management Plan (WQMP). The WQMP shall identify the site design, source control and treatment control BMPs that would be implemented on the site to control predictable pollutant runoff.

Significance After Mitigation: Impacts would be less than significant.

Impact 3D.3: Could the proposed project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence liquefaction, or collapse?

The proposed project site is located in a relatively flat area and is not within an area identified as having potential for seismically induced landslides. Therefore, the proposed project is not anticipated to be located on soil that is unstable or would become unstable due to landslide.

The potential for liquefaction at the proposed project site is high and lateral spreading generally occurs where soils are susceptible to liquefaction. Therefore, the potential for lateral spreading would be high.

The project site is relatively level, and the absence of nearby slopes precludes slope stability hazards. The project would include two levels of subterranean parking, and the lower subterranean parking level for the proposed project site would be 25 feet below grade. It is likely that excavation would expose alluvial deposits. These deposits are horizontally stratified and lack any well-defined planar features or discontinuities (such as bedding or joints) that would act as planes of weakness which would decrease slope stability. The geologic conditions at the project site would not create additional surcharge loads on the proposed below grade walls and would not result in a significant impact in terms of slope stability from the operation of the proposed project.

The geotechnical report recommends subterranean or retaining wall design. The sandy alluvium deposits on the site could be prone to local caving, which may result in the potential for temporary slope instability during site excavation. This would be considered a potentially significant impact. Potential hazards related to instability of temporary excavations can be reduced to a less than significant level with proper engineering of the retaining wall design and implementation of mitigation measures.

Potential impacts from lateral spreading, subsidence, liquefaction, or collapse would be significant. Potential hazards related to these impacts can be reduced to a less than significant level with proper engineering design and mitigation.

Conclusion: The proposed project with incorporation of mitigation measures would not contribute to an on- or off-site landslide, lateral spreading, subsidence liquefaction, or collapse.

Mitigation Measures

Measure 3D.15: As specified in the geotechnical investigation, site-specific final design evaluation and grading plan review shall be performed by the project

geotechnical consultant prior to the start of grading to verify that recommendations developed during the geotechnical design process are appropriately incorporated in the project plan. Design and grading construction shall be performed in accordance with the requirements of the California Building Code applicable at the time of grading, appropriate local grading regulations, and the recommendations of the project geotechnical consultant as summarized in the geotechnical investigation, subject to review by the Director of Planning and Building or their designee prior to the issuance of any grading permits.

Measure 3D.16: Site preparation (removal of existing facilities, excavation, subgrade preparation, placement and compaction of fill, foundation preparation, floor slab preparation, positive surface gradient preparation, and pavement of other areas) shall be conducted consistent with the recommendations of the design-level detailed geotechnical investigation, subject to review and approval by the Director of Planning and Building or their designee prior to the issuance of any grading permits. The project geotechnical engineer shall observe all excavations, subgrade preparation, and fill activities and shall conduct soil testing as necessary, consistent with local, state, and federal regulations.

Significance After Mitigation: Less than significant.

Cumulative Impacts

Impact 3D.4: Could the proposed project with other area projects have cumulative impacts on geology and soils in the project area?

Impacts on geology and soils are generally localized or site-specific and do not result in regionally cumulative impacts. Most of the proposed project's impacts would not be cumulatively considerable although exposure to geologic hazards could be cumulatively considerable. Soil erosion would not be cumulatively considerable as there is no other construction in the area of the site.

Conclusion: The proposed project with other area projects would not contribute to cumulative impacts on geology and soils in the project area.

Mitigation: None required.

Significance After Mitigation: Less than significant.

3E. Hazards

This section addresses potential hazardous materials impacts to human health and the environment at the proposed project site as a result of implementation of the proposed project. The information contained on this section is based on the *Phase I Environmental Site Assessment* prepared by Leighton and Associates, Inc., and the *Remedial Action Plan* (RAP) prepared by TRC. Copies of these documents are available for review at the City.

3E.1 Environmental Setting

Existing Seaport Marina Hotel Uses

The relatively level site is approximately 10.9-acres and is developed with mixed land uses. The Seaport Marina Hotel, with a night club, an Enterprise Car Rental, and The Elks Club as tenants, currently occupies the site. The rest of the site is covered with asphalt concrete and is used for vehicle parking. One parcel on the project site is an empty lot that was a former 76 (Unocal) service station. A small area of the project site is landscaped. According to the Phase I, the following hazardous substances associated with the hotel operation are present at the project site.

Hazardous Substances

The following hazardous waste and regulated substances associated with the existing hotel operation were observed on the project site: lubricating oil tank; various cleaning supplies; compressed nitrogen; compressed oxygen; flammable gas; dissolved acetylene; oil; pool maintenance chemicals; compressed helium; algae control; various industrial soaps and detergents; asbestos wetting removal agent; grease; and lubricants.

Polychlorinated Biphenyls

Three polychlorinated biphenyls (PCB)-containing transformers were observed in the cement block enclosure located in the parking lot on the eastern side of one of the hotel buildings. In addition, a slab-mounted transformer was observed within the cement block enclosure located in the northeastern portion of the hotel parking lot. No staining was observed beneath the transformers.

Pesticides

Unmarked spray bottles were observed in the maintenance shop near the main kitchen of the hotel. According to the maintenance supervisor of the hotel, the bottles contained pesticides. An additional bottle of pesticide was observed on the north side of the hotel, near the cooling tower. The bottle was lying on its side, and staining was observed on the concrete tiles. The staining appeared to be only on the surface of the tiles.

In addition, several pest control boxes with poison were observed throughout the site.

Asbestos-Containing Materials/ Lead-Based Paint

The existing hotel structures were constructed in 1963 and asbestos-containing materials (ACMs) and lead-based paint (LBP) were identified in the survey. In addition, a sign stating, "Caution. Asbestos. Cancer and Lung Disease Hazard. Do not disturb without proper training and equipment" is posted on the outside of the maintenance shop near the kitchen in the hotel.

Previous Uses

In 1968, the hotel owners developed a 76 (Unocal) service station on the northeastern corner of the project site. The service station was demolished in 1989. A Mobil service station is located east of the site on the southeast corner of the intersection of PCH and Second Street. **Figure 3E.1** illustrates previous site investigations and findings. Commercial, retail, and marine-related businesses surround the site.

Underground Storage Tanks

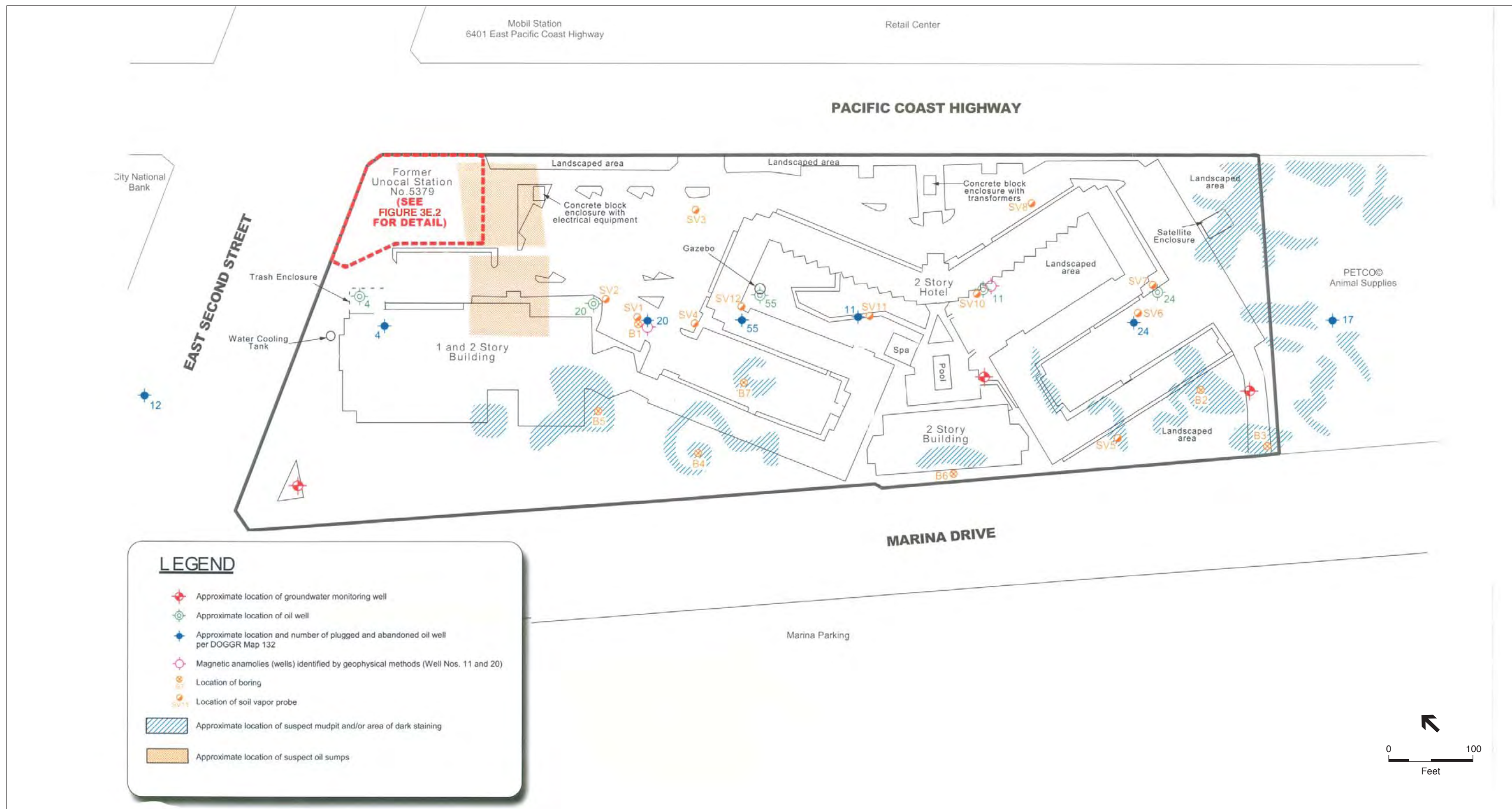
The former 76 (Unocal) service station located on the proposed project site originally included two 9,950-gallon gasoline and one 550-gallon waste oil underground storage tanks (USTs) and associated dispensers and product lines (**Figure 3E.2**). The USTs were installed in 1968 in the northeast portion of the proposed project site. The original USTs were replaced in October 1989 by two 10,000 gallon gasoline USTs. These USTs and associated dispensers and piping were removed in July 1998 during site demolition activities.¹

Liquid-phase Hydrocarbons

Liquid-phase hydrocarbons (LPHs) and other chemicals have been detected at the project site at different monitoring events conducted at different times. In June 1985, three groundwater monitoring wells were installed on-site. LPHs were detected in October 1985. In October 1989, the 76 (Unocal) service station fuel UST system was removed and replaced. In November 1996, a low-risk site closure request was submitted to the Regional Water Quality Control Board (RWQCB). The RWQCB required further monitoring at the site. In July 1998, the USTs, dispensers, and product lines were removed, and the service station was subsequently demolished. In August and September 1998, seven groundwater monitoring wells were installed at the site, per the RWQCB's request for further monitoring.

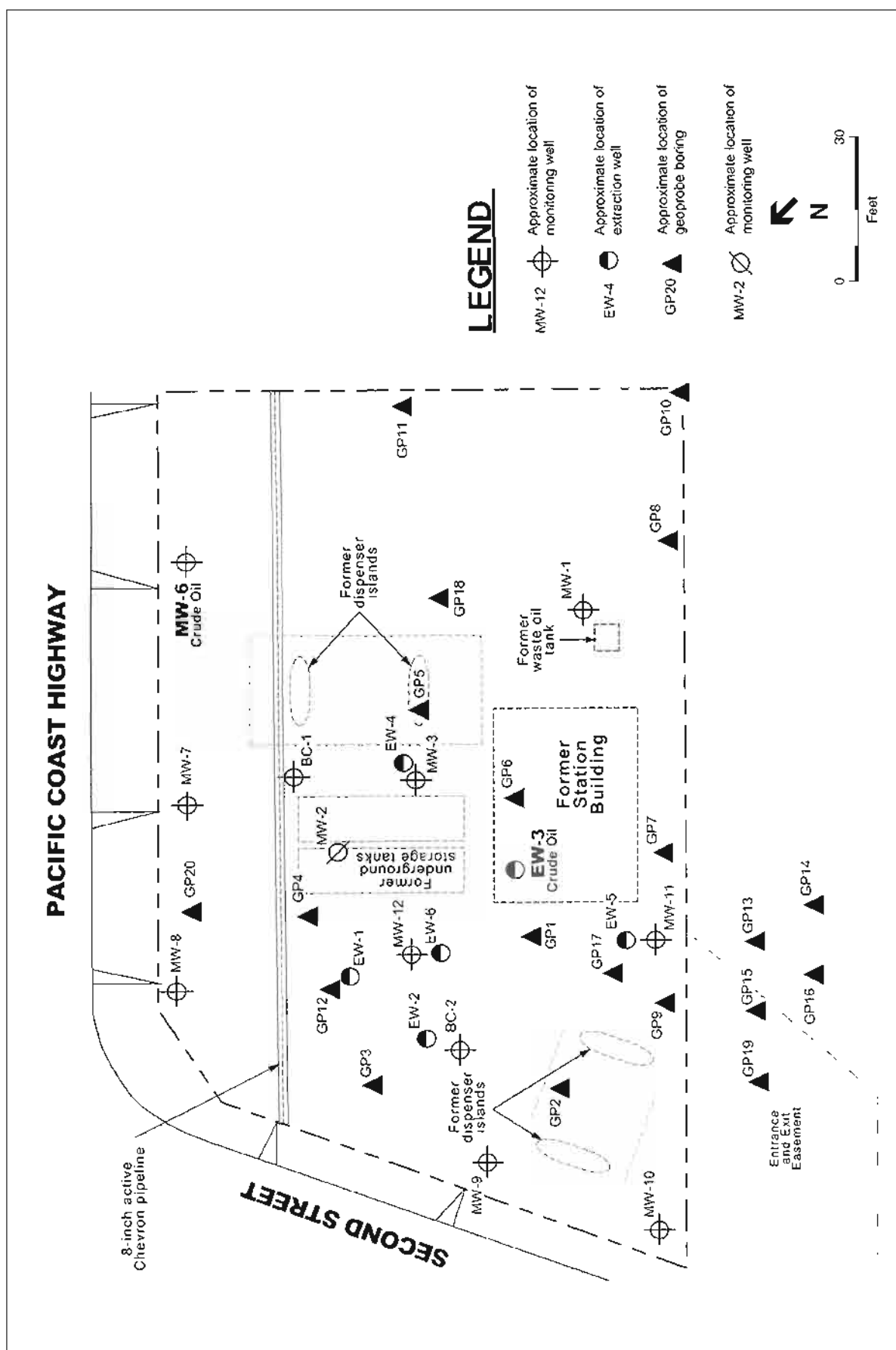
Samples of LPH were collected from on-site monitoring wells and submitted to state-certified laboratories for fuel fingerprinting analysis. In September 1998, LPH samples

¹ Keane, Steve, *Remedial Action Plan*, May 21, 2003.



SOURCE: Leighton and Associates, Inc 2006.

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Figure 3E.1
 Previous Site Investigations



from monitoring wells were interpreted by the laboratory to be substantially weathered gasoline with less than four percent “motor oil” range hydrocarbons.

In August 1999, a sample of LPH collected from another on-site monitoring well was analyzed for benzene, toluene, ethylbenzene, total xylenes, and methyl tertiary butyl ether (MTBE). All of these chemicals, with the exception of MTBE, were detected in the sample. In October 1999, a sample of LPH from a monitoring well was analyzed and interpreted to be crude oil.

In November 1999, 20 geoprobe borings were made in the former service station site and off-site in the asphalt parking lot of the hotel property. Groundwater was encountered at depths ranging from 7 to 11 feet below ground surface (bgs) in the geoprobe borings. LPH was not detected in any of the geoprobe borings.

In May 2000, extraction wells were installed to a depth of 12 feet bgs in the hydrocarbon source area. On August 28, 2000, two extraction wells (EW-5 and EW-6) were installed to a depth of 12 bgs adjacent to two monitoring wells (MW-11 and MW-12), respectively, to facilitate remediation.

The last date of LPH detection, other than crude oil, in a monitoring well was October 18, 2000. In October and November 2000, extended dual-phase vacuum extraction was performed for a total of 659 hours. The total equivalent volume of hydrocarbons recovered through vapor extraction from extraction wells EW-1, EW-2, EW-5 and EW-6 was 262 gallons. The total volume of hydrocarbons-affected groundwater recovered during the same period was 24,500 gallons.

During a monitoring and sampling event conducted on April 16, 2002, crude oil was detected in extraction well EW-3 and monitoring well MW-6. LPH, excluding crude oil, has not been detected at the site since October 2000.

In May 2003, TRC prepared a RAP for the project site. The remedial action that the RAP recommended was a Biosparage Remediation System.² Remedial actions performed at the project site included weekly LPH pumpouts, UST overexcavation and dual-phase vacuum extraction. A total of 595.5 tons of hydro-carbon affected soil, 446.29 gallons equivalent volume of hydrocarbons were recovered through vapor extraction, and 67,900 gallons of hydrocarbon-affected groundwater were removed from the site during remedial activities as of May 2003. The following is a summary of subsequent remediation activities:

- In July 2003, the RWQCB approved the proposed RAP;
- In September 2003, the installation of remediation wells was completed;

² Biosparaging is an in-situ remediation technology that uses indigenous microorganisms to biodegrade organic constituents in the affected soil. In biosparaging, oxygen and nutrients (if needed) are injected into the affected soil to increase biological activity of the indigenous microorganisms. The biosparage remediation system was installed in mid-2003.

- Between October 2003 and February 10, 2004, the Biosparge Remediation System was installed;
- On February 10, 2004, operation of the Biosparge Remediation System began; and
- There is ongoing quarterly groundwater monitoring, sampling, and reporting to evaluate the effectiveness of this Biosparge Remediation System.

In August 2004, Leighton and Associates, Inc. prepared a Phase I Environmental Assessment to evaluate hazardous materials, including petroleum hydrocarbons and metals, present at the project site. The extent of the remaining petroleum hydrocarbon and metals contamination from the operation of the USTs and support facilities was not fully known at the time that the Phase I was prepared. The extent of contamination cannot be adequately assessed until the existing buildings have been demolished and excavation and grading activities have exposed soils that were previously concealed by the buildings. Although there has been extensive subsequent monitoring and remediation at the site since the Phase I, the extent of contamination at the site cannot be fully known until these activities have occurred so that further testing and monitoring can be conducted.

Operation and maintenance of the Biosparge Remediation System is ongoing with the most recent monitoring results that have been submitted to the City are from May 2005. Benzene, toluene, ethylbenzene, and MTBE were all detected in these data.³ In addition, petroleum hydrocarbons, possibly from the on-site abandoned crude oil pipelines (discussed further below) have been detected during different monitoring events in the groundwater samples collected from the project site.⁴

Target groundwater cleanup levels have not been established by the RWQCB. According to the Phase I Environmental Assessment, Conoco/Phillips is planning to remediate the petroleum impacted groundwater to commercial levels.

Furthermore, migration of hazardous substances to soil and groundwater beneath the project site may result from a gasoline leak reported in 1998 at the Exxon station located at 6401 East Pacific Coast Highway, approximately 0.05 miles northeast of the project site. The Exxon station site is in the process of being remediated and is under the jurisdiction of the RWQCB. According to the quarterly groundwater and status report for the third quarter 2005 for this site and given that it is located upgradient of the project site, contaminants have likely not spread from the Exxon station site to the project site.⁵

³ TRC, *Quarterly Monitoring Report, April through June 2002, Former 76 Station 5379, 6280 East Second Street, Long Beach, California*, July 11, 2005.

⁴ *Ibid.*

⁵ *Ibid.*

Oil Wells

The site was an oil field from roughly 1926 to 1964. On December 6, 2001, a geophysical survey was conducted on the site using field magnetic and electromagnetic methods to evaluate whether or not oil well casings were present. The geophysical survey identified two possible oil well casings and a small anomaly. According to the Division of Oil, Gas and Geothermal Resources, five plugged and abandoned oil wells are located on the property. An oil well was also located on the southern portion of the property. All the wells were once owned by Standard Oil of California and were drilled and abandoned approximately during the period 1945 to 1959.

In a Phase I Environmental Site Assessment conducted by Geosphere Environmental, Inc. in April 1999, a groundwater well cover was observed on the eastern portion of the property. During the investigation, the groundwater well was not accessible because the lid was rusted shut. Geosphere recommended abandonment of the groundwater well, as prescribed by applicable regulatory agencies described below.

Oil and Gas Pipelines

On April 14, 2004, Leighton Consulting, Inc. requested Underground Service Alert DigAlert to locate underground utilities, including oil and gas pipelines at the site. A representative from Leighton Consulting, Inc. met at the site with a Chevron Pipeline representative to get a precise location of the Chevron Pipeline crude oil pipeline crossing the site. An eight-inch crude oil pipeline and easement runs on the east side of the site along PCH (see **Figure 3E.3**). Other oil pipelines were mapped during the site visit, in addition to other underground utilities.

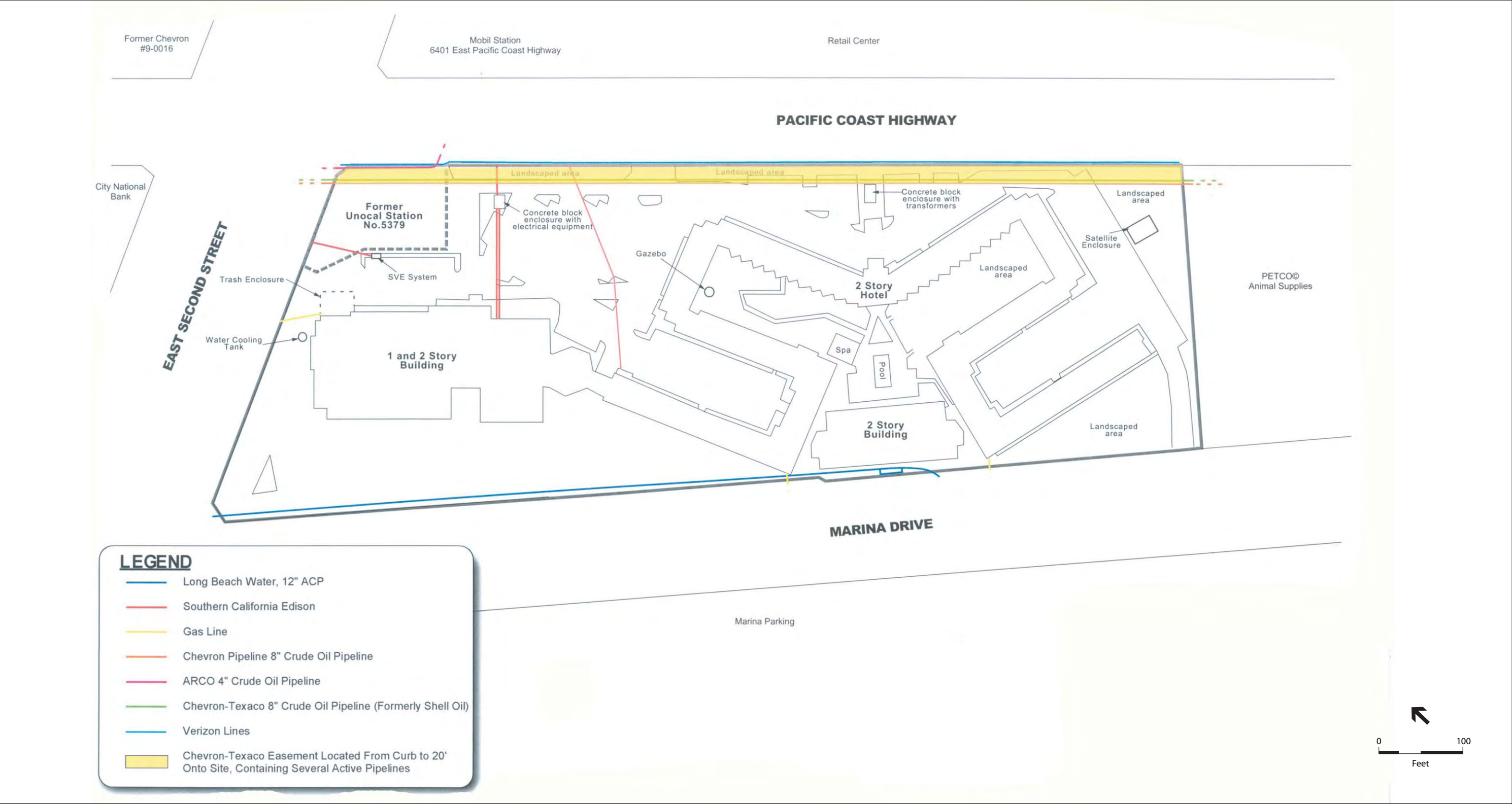
Hazardous Waste Facilities Located within One-Quarter Mile

Research and consultation was conducted as part of a Preliminary Environmental Site Assessment (Phase I) investigation to identify facilities located within the vicinity of the project site that might reasonably be anticipated to emit hazardous emissions or handle hazardous or acutely hazardous material. As shown in **Table 3E.1**, the results of the survey found that there are 10 such facilities located within one-quarter mile of the project site.

3E.2 Regulatory Background

Federal

In 1984, Subtitle I was added to the Resource Conservation and Recovery Act (RCRA), which required the U.S. Environmental Protection Agency (EPA) to develop a comprehensive regulatory program for USTs storing petroleum or certain hazardous substances.



SOURCE: Leighton & Associates, Inc 2004.

Long Beach Marina EIR . 204452
Figure 3E.3
Pipeline/Utility/Easement Locations

**TABLE 3E.1
HAZARDOUS WASTE FACILITIES LOCATED WITHIN ONE-QUARTER MILE OF THE SITE**

| Name(s) | Address | List(s) | Incident (Date) |
|--|-------------------------------------|-------------------------|--|
| 1. Dave's Marina Chevron | 6301 East Second Street, Long Beach | RCRA TSD | No Incident |
| 2. Exxon Station No. 73047 | 6401 East PCH, Long Beach | RCRA TSD UST ERNS | Gasoline Release (1997) Diesel Leak (1990) Hydraulic Fluid Leak (1992) |
| Mobil 11BT7 (formerly Exxon No. 73047) | 6401 East PCH, Long Beach | LUST ERNS | Gasoline Release (1995) Hydrocarbons Leak (1996) |
| 3. Marina Shipyard | 6400 Marina Drive, Long Beach | RCRA TSD UST | No Incident |
| 4. Parking lot | 6378 East PCH, Long Beach | ERNS | Soils Dump |
| 5. J S Cleaners & Laundry | 6481 East PCH, Long Beach | CALSITES | No Incident |
| 6. City Dump and Salvage No. 1 | 6363 East PCH, Long Beach | SWL | No Incident |
| 7. City Dump and Salvage No.2 | 6501 East PCH, Long Beach | SWL | No Incident |
| 8. Chevron Station No. 202015 | 6401 East PCH, Long Beach | UST | No Incident |
| 9. Chevron Station No. 90016 | 6301 East Second Street, Long Beach | UST | No Incident |
| 10. Tai Pan Bistro | 6380 East PCH, Long Beach | UST | No Incident |

SOURCE: Leighton Consulting, Inc, *Phase I Environmental Site Assessment Report*, August 2004.

The new regulations required owners and operators of new tanks and existing tanks to prevent, detect, and clean up releases, and banned the installation of unprotected steel tanks and piping beginning in 1985. RCRA requires that treatment, storage, or disposal sites (TSDs) are listed. The EPA maintains another database of emergency response actions referred to as the Emergency Response Notification System (ERNS).

In 1986, Congress amended Subtitle I of RCRA and created the Leaking Underground Storage Tank (LUST) Trust Fund to be used to oversee cleanups by responsible parties and pay for cleanups at sites where the owner or operator is unknown, unwilling, or unable to respond, or which require emergency action.

States have the primary authority to implement the UST program within their boundaries. States may have more stringent regulations than the federal requirements. State of California regulations are found in CCR Title 23, Division 3, Chapter 16. The regulations include requirements for monitoring existing tanks; cleaning up, repairing, and upgrading leaking tank; and design, installation, and monitoring requirements for new tanks.

State

California Government Code

California Government Code Section 65962.5 requires DTSC, DHS, the State Water Resources Control Board, and the local enforcement agency to compile and update at least once a year a list of all hazardous waste-related facilities, including sites with USTs and LUSTs. DTSC maintains a database referred to CALSITES that contains potential or confirmed hazardous substances release properties. The Department of Consumer and

Regulatory Affairs maintains a database of open, closed, and inactive solid waste disposal facilities and transfer stations.

Department of Oil, Gas and Geothermal Resources

The California Laws for Conservation of Petroleum & Gas Section 3208.1 guides proper well abandonment to prevent, as far as possible, damage to life, health, and property.⁶ The State Oil and Gas Supervisor may order the re-abandonment of any previously abandoned well if there is reason to question the integrity of the previous abandonment.

South Coast Air Quality Management District

SCAQMD Rule 1403, *Asbestos Emissions from Demolition/Renovation Activities*, requires that the owner or operator of any demolition or renovation activity have the affected facility or facility components thoroughly surveyed for the presence of asbestos prior to such activity occurring. The survey includes the inspection, identification, and quantification of all friable, and Class I and Class II non-friable ACM, and any physical sampling of materials. If these materials are found, they must be removed in accordance with the strict protocols established by the SCAQMD.

Local

There are no specific goals or policies related to hazardous materials in the City's General Plan. The Public Safety Element lists general protection and remedial action goals for general safety hazards and for emergencies. Transport of hazardous materials is deferred to Caltrans requirements and is restricted along specified truck routes. No truck routes that are restricted for the transport of hazardous materials are located near the project site.⁷ The Public Safety Element indicates that planning efforts should include a buffer for all uses from truck routes to reduce potential impacts from dangerous materials by way of setbacks or natural barriers.

The project is subject to the following chapters of the City of Long Beach Municipal Code with regard to hazardous materials:

Chapter 8.64 Air Pollution. Provides the City with authority to prevent injury or damage to businesses or property due to air pollution.

Chapter 8.85 Underground and Aboveground Storage Tanks. Designates the City with authority to prevent injury or damage to businesses or property due to air pollution.

⁶ California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, *California Laws for Conservation of Petroleum & Gas*, Publication No. PRC01, January 2005.

⁷ Caltrans website, <http://www.dot.ca.gov/hq/traffops/trucks/trucksize/list-restrict.htm>, accessed June 5, 2006.

- Chapter 8.86 Hazardous Materials Release Response Plans and Inventory. Designates the Long Beach Certified Unified Program Agency (CUPA)⁸ as the local authority for underground and aboveground storage tank compliance.
- Chapter 8.87 Hazardous Waste Control. Designates the Long Beach CUPA as the local authority to enforce Chapter 6.5 of Division 20 of the California Health and Safety Code.
- Chapter 8.88 Hazardous Materials Clean-up. Requires site characterization, site remediation, and initial and final reports for contaminated sites in accordance with state and local laws and regulations.

3E.3 Environmental Impacts and Mitigation Measures

Methodology

The environmental baseline for the proposed project and project alternatives is based on the RAP⁹ conducted for this project. Construction of the proposed project could potentially result in the release of hazardous materials related to both construction and ongoing remediation. Furthermore, operation of the proposed project could introduce new sources of hazardous materials to the proposed project site. The potential impacts are described in terms of the likelihood and severity of public contact with hazardous materials and whether this level of contact would be considered to result in a significant, adverse impact. Mitigation measures to reduce potential impacts are recommended and assessed for expected effectiveness and potential impacts if implemented.

Significance Criteria

The criteria used to determine the significance of an impact are based on the Initial Study Checklist in Appendix G of the *CEQA Guidelines* and City precedent. Several criteria were eliminated from further consideration in the Initial Study because: (1) the project would not include routine transport, use or disposal of hazardous materials; (2) emit hazardous emissions within one-quarter mile of a school; (3) is not located within two miles of an airport or private airstrip or within an airport land use plan; (4) would not physically interfere with an adopted emergency response/evacuation plan; and (5) is not located in an area subject to wildland fires. These issues, therefore, will not be discussed here. Please refer to the Initial Study (Appendix A) for further clarification. The criterion is also based on the City of Long Beach General Plan and Municipal Code. For this analysis, the proposed project may result in significant impacts if it would:

- Be located on a site which is included on a list of hazardous materials sites, as a result, would create a significant hazard to the public or the environment.

⁸ The Long Beach CUPA is a joint powers agency that combines both the fire department and health department programs related to hazardous materials management into one agency.

⁹ Keane, Steve, *Remedial Action Plan*, May 21, 2003.

Project Impacts

Impact 3E.1: Could the proposed project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?

The area of the proposed project site that was a former 76 service station is listed as a UST and LUST pursuant to Government Code Section 65962.5. Without mitigation, there is the potential for significant hazardous substances impacts with the implementation of the proposed project during the construction and operation phases of the proposed project. These potential impacts are discussed in detail below.

Construction

The construction phase of the proposed project includes demolition, soil sampling, and contaminated soil or groundwater removal/remediation, if required as well as site preparation/grading. There are also five abandoned oil wells located on the proposed project site and a crude oil pipeline/easement along the eastern boundary of the project site.

As discussed in Section 3E.1, abatement and remediation of the 76 service station is underway. In addition, petroleum hydrocarbons, possibly from the on-site abandoned crude oil pipelines, and MTBE have been detected during different monitoring events in the groundwater samples collected from the site.¹⁰ Prior to site redevelopment, the oil wells located on-site would need to be re-abandoned in accordance with the current state regulations. Improper handling methods of hazardous materials could cause potential impacts to the on-site and off-site environment. However, abatement, remediation and re-abandonment of the oil wells are subject to specific local, state, and federal regulations. Compliance with these regulations is considered adequate to address potential impacts from abatement, remediation, and re-abandonment activities. Therefore, Mitigation Measure 3E.1 requiring compliance with applicable regulations would reduce the potential impacts from abatement, remediation, and re-abandonment of the oil wells to less than significant levels.

Other potential hazardous substances at the project site include asbestos, LBP, and PCBs in structures to be demolished. Compliance with local, state, and federal regulations regarding the handling and disposal of these hazardous substances is considered adequate to reduce potential impacts to less than significant levels. Therefore, implementation of Mitigation Measure 3E.2 requiring compliance with applicable regulations would reduce potential impacts from asbestos, lead, and PCBs to less than significant levels.

¹⁰ TRC, *Quarterly Monitoring Report, April through June 2002, Former 76 Station 5379, 6280 East Second Street, Long Beach, California*, July 11, 2005.

The extent of contamination that is present at the site would be better known after demolition and excavation activities have exposed soils that were previously concealed by the existing structures. Completion of a detailed soils investigation and removal and disposal of any contaminated soils and/or groundwater is required to prevent significant impacts to human health and/or the environment. Regulatory requirements are in place to address handling and disposal of contaminated soils and groundwater that is locally overseen by the Long Beach CUPA. Compliance with local, state, and federal requirements with regard to contaminated soils and groundwater is considered adequate to address potential impacts related to these hazardous substances. Implementation of Mitigation Measures 3E.3 and 3E.4, requiring compliance with applicable regulations, would reduce potential impacts from contaminated soils and groundwater associated with the USTs and support facilities to less than significant levels.

Due to compacted fill soils and historical use of the site, there is the potential for additional hazards to be encountered during rough grading and excavation activities. A Soil and Air Monitoring Program that includes a Health and Safety Plan is required by the Long Beach CUPA to prevent significant impacts to human health and the environment during soil disturbance activities. Compliance with local, state, and federal regulations regarding the handling and disposal of hazardous soils or groundwater, as outlined in the Soil and Air Monitoring Program Mitigation Measure 3E.5) would reduce potential impacts from these elements to less than significant levels.

Project construction would involve routine use of hazardous materials such as fuels, paints, and solvents. The project applicant is required to implement standard BMPs with regard to hazardous materials used during construction (refer to Section 3F, Hydrology, Water Quality, and NPDES of this EIR). Mitigation measures would reduce potential significant hazardous substances impacts associated with demolition, grading, excavation, and construction of the project to less than significant.

Operation

The proposed project could utilize, store, and sell hazardous materials such as solvents, paints, and pesticides. The proposed retail and residential uses would store and use household hazardous materials. BMPs are required to prevent pollutants from discharging into the storm drain system from the proposed development (refer to Section 3F, Hydrology, Water Quality, and NPDES of this EIR). All businesses in the City of Long Beach that utilize hazardous materials above state thresholds are required to submit a Hazardous Materials Release Response Plan and Inventory to the Long Beach CUPA for review and approval (Municipal Code, Chapter 8.86). Implementation of BMPs and compliance with local, state, and federal regulations regarding hazardous materials use and storage are considered adequate to address these potential hazards. Therefore, Mitigation Measure 3E.5 would reduce potential impacts regarding use and storage of hazardous materials during operation of the project to less than significant levels.

There are no schools within one-quarter mile of the project site. However, Naples Elementary School, Kettering Elementary School, Lowell Elementary School, and Rogers Middle School are within one-mile of the proposed project site. Compliance with the mitigation measures would ensure that any hazardous emissions or handling of hazardous substances or materials would not result in a significant impact to the surrounding area, including the proposed project.

Conclusion: With incorporation of mitigation measures, the proposed project would not create a significant hazard to the public or the environment.

Mitigation Measures

Measure 3E.1: Prior to the issuance of any demolition permits, the project applicant shall submit an application to the Long Beach Fire Department (LBFD) for approval to re-abandon wells and remove any pipeline conveyance systems from the property. The LBFD shall review the application for compliance with local, state, and federal requirements with well- and pipeline-handling procedures including sampling of subsurface soils and transport and disposal of tanks and soils/liquids. The LBFD shall oversee and monitor the operation in accordance with local, state, and federal requirements.

Measure 3E.2: Prior to the issuance of any demolition permits, all identified asbestos containing materials (ACMs), and lead-based paints (LBPs) shall be removed, handled, and properly disposed of by appropriately licensed and qualified individuals in accordance with applicable regulations during demolition of structures (40 CFR, Subchapter R, TSCA, Parts 745, 761, and 763). Air monitoring shall be completed by appropriately licensed and qualified individuals in accordance with applicable regulations (for example, SCAQMD) and to provide safety to workers and the adjacent community. The project applicant shall provide documentation (for example, all required waste manifests, sampling, and air monitoring test results) to the City of Long Beach Health Department showing that abatement of any ACMs, LBPs, or PCB-containing electrical fixtures identified in these structures has been completed in full compliance with all applicable regulations and approved by the appropriate regulatory agency(ies) (40 CFR, Subchapter R, TSCA, Parts 716, 745, 761, 763, and 795 and CCR Title 8, Article 2.6).

Measure 3E.3: Prior to the issuance of any demolition permits, the project applicant shall submit an Emergency Action Plan to the Long Beach Fire Department for review and approval. The plan shall be consistent with local, state, and federal regulations and shall provide detailed procedures in the event of a hazardous substance leak or spill from on-site conveyance systems and associated equipment.

Measure 3E.4: Prior to the issuance of any grading permit and after removal of the pipeline conveyance systems, and hazardous materials storage area(s), a detailed soil matrix investigation workplan shall include sampling for petroleum. The purpose of the investigation will be to confirm the previously reported remediation at the site and to delineate the reported soil impact at the site. The Long Beach CUPA will determine whether groundwater sampling is required.

The Long Beach CUPA shall review the workplan and shall list any additional requirements. Implementation of the workplan shall be overseen by the Long Beach CUPA for compliance with local, state, and federal regulations. Any additional sampling or soil or groundwater removal shall be subject to these same regulations. After remediation activity is completed to the satisfaction of the Long Beach CUPA or the RWQCB, a No Further Action Letter is to be issued prior to the commencement of rough grading.

The project applicant shall also perform a subsurface soil sampling to determine if petroleum has impacted the subsurface soil in the location of the previously identified oil sumps in the northern area of the site and in the area of the suspected mud pit and/or areas of dark stained soil noted in the Phase I Environmental Assessment historical aerial photographs.

Measure 3E.5: Prior to the issuance of any grading permit, the project applicant shall submit a Soil and Air Monitoring Program and associated Health and Safety Plan to the City of Long Beach Planning and Building Department, SCAQMD, and the Long Beach CUPA for review and approval. The program shall be consistent with local, state, and federal regulations and shall encompass all soil-disturbance activities. The Health and Safety Plan shall include the following components:

- A summary of all potential risks to construction workers, monitoring programs, maximum exposure limits for all site chemicals, and emergency procedures;
- The identification of a site health and safety officer;
- Methods of contact, phone number, office location, and responsibilities of the site health and safety officer;
- Specification that the site health and safety officer shall be immediately contacted by the construction contractor should any potentially toxic chemical be detected above the exposure limits or if evidence of soil contamination is encountered during site preparation and construction;
- Specification that the Long Beach CUPA shall be notified of evidence of soil contamination is encountered; and
- Specification that an on-site monitor will be present to perform monitoring and/or soil and air sampling during grading, trenching, or cut and fill operations.

Measure 3E.6: Prior to the issuance of any grading permit, the project applicant shall perform a soil gas survey for fixed gases including methane, hydrogen sulfide, and volatile organic compounds (VOCs) in the area of the abandoned oil well to assess the possible presence of methane or other vapors associated with abandoned wells.

Significance After Mitigation: Less than significant.

Cumulative Impacts

Impact 3E.2: Together with other area projects, could the proposed project have cumulative hazards impacts?

The hazardous materials study area considered for cumulative impacts consisted of the area that could be affected by proposed project activities and the areas affected by other projects whose activities could directly or indirectly affect the presence or fate of hazardous materials on the proposed project site. In general, only projects occurring adjacent to or very close to the project site are considered because of the limited potential impact area associated with the release of hazardous materials into the environment.

Under existing conditions, the site soils and groundwater are contaminated with hazardous substances that need to be removed and transported off-site to an approved disposal facility. This would be a temporary condition that is subject to regulatory oversight. Once the proposed project site has been remediated to the satisfaction of the Long Beach Fire Department or the RWQCB, operation of the completed project would involve the use and storage of household hazardous materials typical of other uses in the area.

Conclusion: The proposed project together with other area projects would not contribute to cumulative hazards impacts.

Mitigation: None required.

Significance After Mitigation: Less than significant.

3F. Hydrology, Water Quality, and National Pollutant Discharge Elimination System

This section presents an analysis of the potential hydrologic and water quality impacts associated with implementation of the proposed project. The environmental baseline for the proposed project is based on the geotechnical evaluation conducted by Converse Consultants, the hydrology and hydraulics analysis prepared by Huitt-Zollars, the approved remedial action plan prepared by TRC for the former 76 (Unocal) Station 5379 located at 6260 East Second Street, and other available hydrologic information pertinent to the project area. Copies of these documents are available for review at the City.

3F.1 Environmental Setting

The proposed Seaport Marina project lies near the southern boundary of the Los Angeles Basin at an elevation of approximately nine feet above mean sea level (msl).¹ The proposed project site lies near the mouth and estuary of the San Gabriel River, less than one mile from the Pacific Ocean to the southwest. The project site is primarily occupied by the 250-room Seaport Marina Hotel.

The Alamitos Bay is located approximately 0.2 miles southwest of the site. Cerritos Channel is located approximately 0.4 miles north of the site. The San Gabriel River is located approximately 0.5 miles from the site. The proposed project site is also adjacent to the Long Beach Outer Harbor, which is a part of the greater San Pedro Bay. Figure 2.1 in the project description shows the site location.

The *Water Quality Control Plan for the Los Angeles Region* outlines beneficial uses for water bodies within its boundary including the use of water for recreational activities that require body contact with the water, and recreational activities that require proximity to water.² Both uses involve the possibility of the ingestion of water. Other potentially beneficial uses of this portion of the San Gabriel River include: municipal and domestic water supply, uses of water that support warm water ecosystems, and uses of water that support terrestrial ecosystems.³

The proposed project site is adjacent to the San Gabriel River Reach 1 (Estuary to Firestone). The RWQCB has placed this reach on its 303(d) list of impaired waters. Section 303(d) of the Clean Water Act (CWA) requires the identification of waterbodies that do not meet, or are not expected to meet, water quality standards, or are considered impaired. The affected waterbody, and associated pollutant or stressor, is then prioritized in the 303(d) list. Under Section 303(d) of the 1972 CWA, states, territories and authorized tribes are required to develop this list of water quality limited segments.

¹ TRC, *Remedial Action Plan: Former 76 Station 5379, 6260 East Second Street, Long Beach, California*, prepared for ConocoPhillips Company. May 21, 2003.

² RWQCB, *Water Quality Control Plan, Los Angeles Region*, 1994.

³ *Ibid.*

The law requires that these jurisdictions establish priority rankings for water on the lists and develop action plans, called Total Maximum Daily Loads (TMDLs), to improve water quality. Even though TMDLs have yet to be determined for most of the identified impaired water bodies, a priority schedule has been developed to complete the process in the region within 13 years.

Impairments within this reach include: (1) abnormal fish histology, (2) algae, (3) coliform, and (4) toxicity.⁴ Currently, the RWQCB has not devised total maximum daily loads (TMDLs) for this reach.

Surface Water and Storm Drainage System

The project site is located in an urban area and does not contain any blue-line streams or natural water features. The site has a general drainage pattern from west to east and from north to south. The current storm drainage system at the site conveys sheet flow offsite to the south with surface drainage being directed by sheet flow to gutters along adjacent streets. Presently, the storm drain system in the vicinity of the project site includes a 24-inch and a 30-inch storm drain pipe along PCH.⁵

Flooding

According to the Federal Emergency Management Agency (FEMA), the project site is located in the 100-year flood zone. This is an area of special flood hazard that results from the de-certification of a previously accredited flood protection system. It is in the process of being restored to provide 100-year or greater level of flood protection by FEMA.⁶

According to the City of Long Beach Public Safety Element, the project site is not located in an area subject to flood inundation from dam failure during a seismic event.⁷ Review of the area adjacent to the project site indicates that there are no up-gradient lakes or reservoirs with the potential to flood the site as the result of a seiche.⁸

Groundwater

The site lies over the West Coast Groundwater Basin. The depth to groundwater is generally less than 50 feet bgs in Long Beach, and at the site the groundwater depths can be less than 10 feet bgs. Geotechnical investigations of the site discovered that groundwater was encountered 10 to 15 feet bgs.⁹

⁴ Information accessed at the RWQCB website at <http://www.waterboards.ca.gov/tmdl/docs/2002reg4303dlist.pdf>.

⁵ Lennar Corporation, *Hydrology and Hydraulics Analysis*, August 24, 2005.

⁶ Federal Emergency Management Agency, *Flood Insurance Rate Map*, Community Panel Number 060136 0025C, revised July 6, 1998.

⁷ City of Long Beach, Department of Planning and Building, *Public Safety Element*, adopted May 1975, reprinted 2004.

⁸ Converse Consultants, *Draft Preliminary Geotechnical Investigation Report*, April 13, 2004.

⁹ Converse Consultants, *Geotechnical Investigation Report, Mixed-Use Community—Seaport Marina*, September 1, 2005.

In the Long Beach area, regional groundwater flow direction is southwesterly towards San Pedro Bay. At the proposed project site, the groundwater generally flows southeasterly, but is highly variable with local highs and lows related to tidal influence.¹⁰ No drinking wells exist within a one-mile radius of the proposed project site.¹¹

A former 76 (Unocal) service station was located on the site and included two 9,950-gallon gasoline and one 550-gallon waste oil USTs and associated dispenser and product lines.¹² The USTs associated dispensers and piping were removed in July 1998.¹³ Refer to Section 3E, *Hazards*. This portion of the site is currently an unpaved vacant lot.

3F.2 Regulatory Background

Clean Water Act

In 1948, Congress enacted the Water Pollution Control Act that has since been significantly amended on several occasions, and is now commonly referred to as the CWA. The CWA delineates a national permitting system for point discharges known as the National Pollutant Discharge Elimination System (NPDES). NPDES is the fundamental regulatory and enforcement tool available under the CWA. NPDES permits typically incorporate specific discharge limitations for point source discharges to ensure that dischargers meet permit conditions and protect state-defined water quality standards.

State Water Resources Control Board

California is authorized to administer key components of the federal water quality management program in the state. The California Water Code establishes nine administrative areas in the state that are administered by RWQCBs. The RWQCBs adopt Water Quality Control Plans for their respective regions. The Water Quality Control Plans designate beneficial uses for each receiving water body and establish water quality objectives to ensure reasonable protection of the beneficial uses.

The existing NPDES framework was expanded in 1987 to regulate stormwater runoff (discharges) originating from municipal, industrial, and construction stormwater discharges. The RWQCB, as an agent of the State Water Resources Control Board (State Board), is authorized to issue these permits as part of its general NPDES authority.

On June 30, 1999, the RWQCB issued Permit No. 99-060 NPDES No. CAS004003 for municipal stormwater and urban runoff discharges within the City of Long Beach. The

¹⁰ TRC, *Quarterly Monitoring Report, April through June 2002, Former 76 Station 5379, 6280 East Second Street, Long Beach, California*, 2002.

¹¹ TRC, *Remedial Action Plan: Former 76 Station 5379, 6260 East Second Street, Long Beach, California*, prepared for ConocoPhillips Company, May 21, 2003.

¹² *Ibid.*

¹³ *Ibid.*

Standard Urban Storm Water Mitigation Plan (SUSMP) was developed as part of the municipal stormwater program to address stormwater pollution from private sector development and redevelopment projects. The SUSMP will be required because of the size of the proposed project and the fact that portions of the project site would drain to Alamitos Bay, a designated Environmentally Sensitive Area. The SUSMP contains a list of the minimum required BMPs that must be used for a designated project.

3F.3 Environmental Impacts and Mitigation Measures

Methodology

Project impacts to hydrology, water quality, and NPDES were evaluated based on the proposed project's adherence to local, state, and federal standards; proposed land use; site design; and proposed BMPs for control of surface runoff and reduction of pollutants in runoff.

Significance Criteria

CEQA defines a significant effect on the environment as a substantial, or potentially substantial, adverse change in the physical conditions within the area affected by the project. Several criteria were eliminated from further consideration in the Initial Study, because the proposed project: (1) would not expose people or structures to flooding due to failure of a levee or dam or seiche; (2) would not expose people to death or injury from tsunami due to breakwater, a system of berms and adequate warning. A hydrology or water quality impact would be considered significant if it would result in any of the following, which are based on the Initial Study Checklist in Appendix G of the *CEQA Guidelines* and City precedent:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater water quality;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (for example, the production rate of pre-existing nearby wells would decline to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site or provide substantial additional sources of polluted runoff;
- Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site, or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems; or
- Require a NPDES permit.

The following impacts and mitigation measures are presented in the general order of the significance criteria listed above.

Project Impacts

Impact 3F.1: Could construction activities associated with the proposed project violate water quality standards or waste discharge requirements?

Construction activities associated with the proposed project might impact water quality due to erosion of exposed soils and subsequent deposition of particles and pollutants in drainage areas. Grading and soil stockpiling increase erosion potential during uncontrolled sheet flow. These activities could expose existing pollutants found in the soil (see Section 3E, Hazards). In addition, the use of materials such as fuels, solvents and paints present a risk to surface water quality due to an increased potential for pollutants to be deposited on the site and transported to the storm drain system.

The proposed project would be required to comply with all applicable federal, state and regional regulations to protect water quality during construction, as well as during the life of the project. Since the project site covers an area greater than one acre, a Stormwater Pollution Prevention Plan (SWPPP) is required. Under NPDES Permit 99-060, issued to the City of Long Beach, the project proponent must submit a Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) prior to commencement of construction activities. In addition, an SWPPP must be prepared and implemented at the project site and revised as necessary if administrative or physical conditions change. The SWPPP would include BMPs, in accordance with the SUSMP for Los Angeles County, that address source reduction and provide measures and controls necessary to mitigate potential pollutant sources. The SWPPP would be available to the public under Section 308(b) of the CWA and would be made available to SWRCB upon request. Required elements of the SWPPP include:

- A site description addressing the elements and characteristics specific to the site;
- Descriptions of BMPs for erosion and sediment controls;
- BMPs for construction waste handling and disposal;
- Implementation of approved local plans;
- Proposed post-construction controls, including a description of local post-construction erosion and sediment control requirements; and
- Non-storm water management.

Recommended BMPs for the construction phase include: proper stockpiling and disposal of demolition debris, concrete, and soil; protecting existing storm drain inlets; stabilizing disturbed areas; erosion controls; proper management of construction materials; waste management; aggressive litter control; and sediment controls. With implementation of

BMPs, impacts to receiving water quality from construction activities would be less than significant.

Dewatering

The proposed project would require dewatering of excavations for the subsurface parking structures. The subsurface parking structures would need to be excavated to a depth of 25 feet bgs. The area is not a major groundwater recharge area, and the shallow groundwater is not suitable for drinking water due to seawater intrusion. The dewatering would not substantially deplete groundwater supplies or interfere with recharge.

Since the shallow groundwater is likely affected by seawater intrusion, total dissolved solids (TDS) would likely be high in the discharge water. In addition, contamination in the groundwater from past land uses could affect discharge water quality. Non-storm water dewatering for discharges meeting certain conditions are allowed under RWQCB NPDES Permit 99-060. Notification and approval from the RWQCB is required prior to conducting these operations. Since dewatering might affect the on-going biosparage remediation activities at the site or might encounter contaminated water, the RWQCB should be consulted prior to initiating dewatering. Approval of the dewatering discharge permit would require assurance that the on-going remediation effort would not be significantly impacted by the temporary dewatering activities.

If a permanent dewatering system is constructed in the design of the structure, the permanent system and the temporary system could be coordinated and portions of the two systems combined.¹⁴

Conclusion: Construction activities with incorporation of mitigation measures have a less than significant impact on water quality standards or waste discharge requirements.

Mitigation Measure

Measure 3F.1: Prior to the issuance of any grading permit, the following measures shall be incorporated on to the final grading plans to ensure that dewatering will not violate water quality standards and or waste discharge requirements:

- Applicant shall submit a Report of Waste Discharge (ROWD) to the RWQCB prior to dewatering. As part of the ROWD, groundwater quality testing shall be conducted to determine that dewatered water quality is adequate for discharge. Groundwater sample analysis results shall be submitted to the RWQCB prior to discharge.
- Dewatering shall be conducted in accordance with the Field Guide to Construction Site Dewatering, October 2001, CTSW-RT-01-010.

¹⁴ Converse Consultants, *Geotechnical Investigation Report, Mixed-Use Community—Seaport Marina*, September 1, 2005.

- Periodic water quality samples shall be collected and analyzed during the dewatering activities to ensure quality of the discharged water.
- If contaminants are reported in water sample results that exceed the RWQCB's discharge limits, discharge of dewatered water to surface waters shall cease immediately. Contaminated dewatered water shall be collected and treated prior to discharge, pursuant to RWQCB approval.

Significance After Mitigation: Less than significant.

Impact 3F.2: Could the proposed project alter the drainage pattern of the site and require the relocation of an existing storm drain pipe?

The proposed project would redevelop an urban site that is already substantially developed. The project would not significantly modify the existing drainage pattern or the quantity of runoff from the site. Based on the results of the hydrologic analysis of the site, the existing peak flow rate at the outlet of the existing storm drain system is 21 cubic feet per second (cfs). The estimated peak flow rate at the outlet after implementation of the proposed project is 17 cfs.¹⁵ Therefore, the proposed conditions would not be detrimental to the existing storm drainage system.

The project would not alter the course of a stream or river; substantially increase the rate of erosion, siltation, or the amount of surface runoff in a manner that would result in flooding on- or off-site. The project site is located in an urban area and is currently developed with commercial uses.

Implementation of the proposed project would require the relocation of an existing City of Long Beach 36-inch reinforced concrete pipe (RCP) storm drain pipe to the southern boundary of the site in order to accommodate the subsurface parking area.¹⁶ The existing 24-inch and 30-inch storm drain pipes would be re-connected to the relocated 36-inch storm drain pipe.¹⁷ The relocated storm drain pipe would then connect to the existing 36-inch RCP storm drain in Marina Drive, west of the site.¹⁸ With these improvements, the existing storm drain system would not be adversely impacted.

Conclusion: The proposed project would have a less than significant impact on the drainage pattern of the site.

Mitigation: None required.

¹⁵ TRC, *Remedial Action Plan: Former 76 Station 5379, 6260 East Second Street, Long Beach, California*, Prepared for ConocoPhillips Company, May 21, 2003.

¹⁶ Lennar Corporation, *Hydrology and Hydraulics Analysis*, August 24, 2005.

¹⁷ *Ibid.*

¹⁸ *Ibid.*

Significance After Mitigation: Less than significant.

Cumulative Impacts

Impact 3F.3: Would the proposed project result in a cumulative impact to water quality and increased urban runoff?

The project would redevelop a parcel of land within the City of Long Beach. The cumulative impacts to water quality and increased runoff from urban development will be addressed in the City's General Plan EIR and the RWQCB Basin Plan. The proposed project is consistent with development plans for the City and would not significantly contribute to impaired water quality in the region.

Conclusion: The proposed project would not contribute to a cumulative impact to water quality and increased urban runoff.

Mitigation: See **Mitigation Measure 3F.1.**

Significance After Mitigation: Less than significant.

3G. Land Use

This section addresses the impacts of the proposed project on existing and planned land uses in the project vicinity. The land use analysis considers the compatibility of the proposed project with applicable local and regional policies and regulations, including the Long Beach General Plan and LCP.

3G.1 Environmental Setting

Existing Land Use at the Project Site

Comprising 10.9-acres, the proposed project site is located at the southwest corner of PCH and Second Street, bounded by Second Street to the north, a retail center to the south, PCH to the east, and Marina Drive to the west.

The project site is currently developed with a 250-room hotel that is two stories in height and was built in 1963. Vehicular access is provided via an existing system of roadways with direct access from PCH, Second Street, and Marina Drive. The project site consists of two parcels occupied by the hotel and night club with an Enterprise Car Rental and The Elks Club as tenants located near the lobby of the hotel. The other parcel is an empty lot that was a former service station (see Section 3E Hazards).

The project site has a General Plan land use designation of LUD No. 7 District (Mixed-Use), and is zoned PD-1 (SEADIP).

Existing Land Uses in the Vicinity of the Project Site

The project site is located in an urbanized area and is primarily surrounded by the following retail and commercial land uses (see Figures 3A.1):

- **North:** Uses along Second Street include a one-story grocery store and bank. The Marina Pacifica Mall, which includes larger retail, restaurant and entertainment uses, is located north of the grocery store and bank. These uses are setback along PCH, and all have surface and some subterranean parking. The area to the northwest of the project site is Marina Pacifica, a private waterfront community consisting of attached residences. The residences are condominiums, ranging from three to five stories in height. Also to the northwest is the Long Beach Marina with a boat launch located south of the Marina Pacifica condominiums. The area northeast of the site consists of a fast food restaurant (northwest corner of Second Street and PCH), oil wells and the Los Cerritos wetlands.
- **South:** Adjacent to the project site along PCH is Marina Shores, a retail center with restaurants, a grocery store, services, and other retail. This center continues to the intersection of PCH and Studebaker Road. Beyond Studebaker Road,

southeast of the project site, are more oil infrastructure facilities and a two-story office building, to the southwest, and the San Gabriel River.

- East: Land uses near the intersection of Second Street and PCH include a service station (southeast corner of Second and PCH). Across from the site on PCH, is The Marketplace, a one-story retail center that includes several restaurants, a grocery store, many small retail shops, and movie theaters. South of the retail center on the east side of PCH, are several one- and two-story office buildings and the Los Cerritos wetlands. In addition, a crude oil pipeline and easement is located along the eastern boundary of the site (see Figure 2.1).
- West: Directly west of the project site (across Marina Drive) is the publicly-owned Alamitos Bay Marina. The parking lot for the Marina occupies most of the area west of the project site (approximately 1,177 parking spaces). Along Marina Drive are restaurants and some boat related retail.

3G.2 Regulatory Background

Citywide Strategic Plan

The City adopted a Citywide Strategic Plan, “Long Beach 2010” that was created in September 1998. The strategic plan includes goals and actions to achieve the long-range vision of the General Plan. The Strategic Plan focuses on goals in five areas: neighborhoods, youth and education, safety, economic opportunity, and the environment. The 2010 Strategic Plan set forth the following seven strategies:

- Becoming a community of neighborhoods;
- Focusing on youth and education;
- Providing community safety for everyone;
- Creating economic opportunity;
- Enabling a progressive environmental community;
- Empowering citizens and linking communities using technology; and
- Ensuring accountability by measuring and reporting progress.

There are several Strategic Plan goals that are applicable to the proposed project, these include:

Goal 1: Build a strong network of healthy neighborhoods (community goals)

Goal 5: Improve the quality and availability of housing (community goals)

Goal 3: Balance business growth and neighborhood needs (economic goals)

Long Beach General Plan

The City of Long Beach General Plan provides the goals, objectives, and policies that guide City decision-makers in directing growth and development. A General Plan must contain at least seven elements: Land Use, Transportation, Housing, Conservation, Noise, Open Space, and Safety. The City's Seismic Safety, Air Quality, and Scenic Routes elements are optional components of a General Plan. Each element discusses in detail official policies and programs the City has adopted regarding each topic. The General Plan also has the LCP, which is required by the California Coastal Act of 1976.

As stated above, the project site has a General Plan land use designation of LUD No. 7 District (Mixed-Use). The LUD No. 7 District is intended for PD zones and allows several land uses in one district. The goal of this kind of blending of land uses is to facilitate and save time and energy in transportation and communications between these uses as well as simplify and shorten transactions of goods and services. In general, the combination of land uses permitted within this district are employment centers (such as retail, offices, and medical facilities); multi-family housing; tourist facilities; and personal and professional services and recreational facilities.

The goals of the Land Use Element (LUE) relevant to development of the project site are as follows:

- Managed Growth: Guide growth to have an overall beneficial impact upon the quality of life of the City residents.
- Economic Development: Long Beach will pursue economic development that focuses upon the international trade while maintaining and expanding its historic economic strengths in aerospace, bio-medicine, and tourism.
- New Housing Construction: In the immediate future, the emphasis should be on for-sale housing for first-time homebuyers and upon upscale residential development.

Local Coastal Program

The project site is located within the area subject to the LCP. The LCP for the City of Long Beach was adopted by the Long Beach City Council and certified by the California Coastal Commission in 1980, after more than two years of study (see **Figure 3G.1**). At its most basic level, the LCP is the action plan for implementation of the California Coastal Act in Long Beach. On a broader level, however, the LCP recognizes the complex needs of the various coastal neighborhoods in the City of Long Beach and represents the commitment of Long Beach to provide continuing protection and enhancement of its coastal resources. Concepts found in the LCP relevant to development of the proposed project are as follows:

- Development of the subject area must be comprehensive and integrated, with a balance sought between the issues of land use, density, traffic, environmental issues, and fiscal impacts. (LCP III-S-5)



Long Beach Marina EIR - 204452
Figure 3G.1
 Local Coastal Program

SOURCE: City of Long Beach, 2005.

- Higher densities (above 7.26 dwelling units per acre) are warranted only when supported by amenities provided to the public without cost, adequate open space is preserved, participation in an internal bicycle path and pedestrian trail system is guaranteed, and private streets are utilized to remove circulation burdens from public thoroughfares. (LCP III-S-6)
- Traffic considerations include limited access to major streets, improved local circulation, preventing streets or circulation patterns from disrupting existing neighborhoods, improving traffic flow on PCH and Studebaker Road, and controlling the number of dwelling units so as to minimize traffic impact. (LCP III-S-6)
- Environmental considerations of special significance include seismic safety, water protection, problems of uncontrolled landfill, methane gas generated in landfill, wildlife protection, the impact of traffic, preserving unique natural habitats, and the landfill requirements for many vacant areas. (LCP III-S-6)
- A primary objective of the LCP is the prevention of traffic intrusion into residential neighborhoods while improving access to the downtown area and the coastline. (LCP II-3)

A LCP Amendment is required to allow for the residential uses of the project.

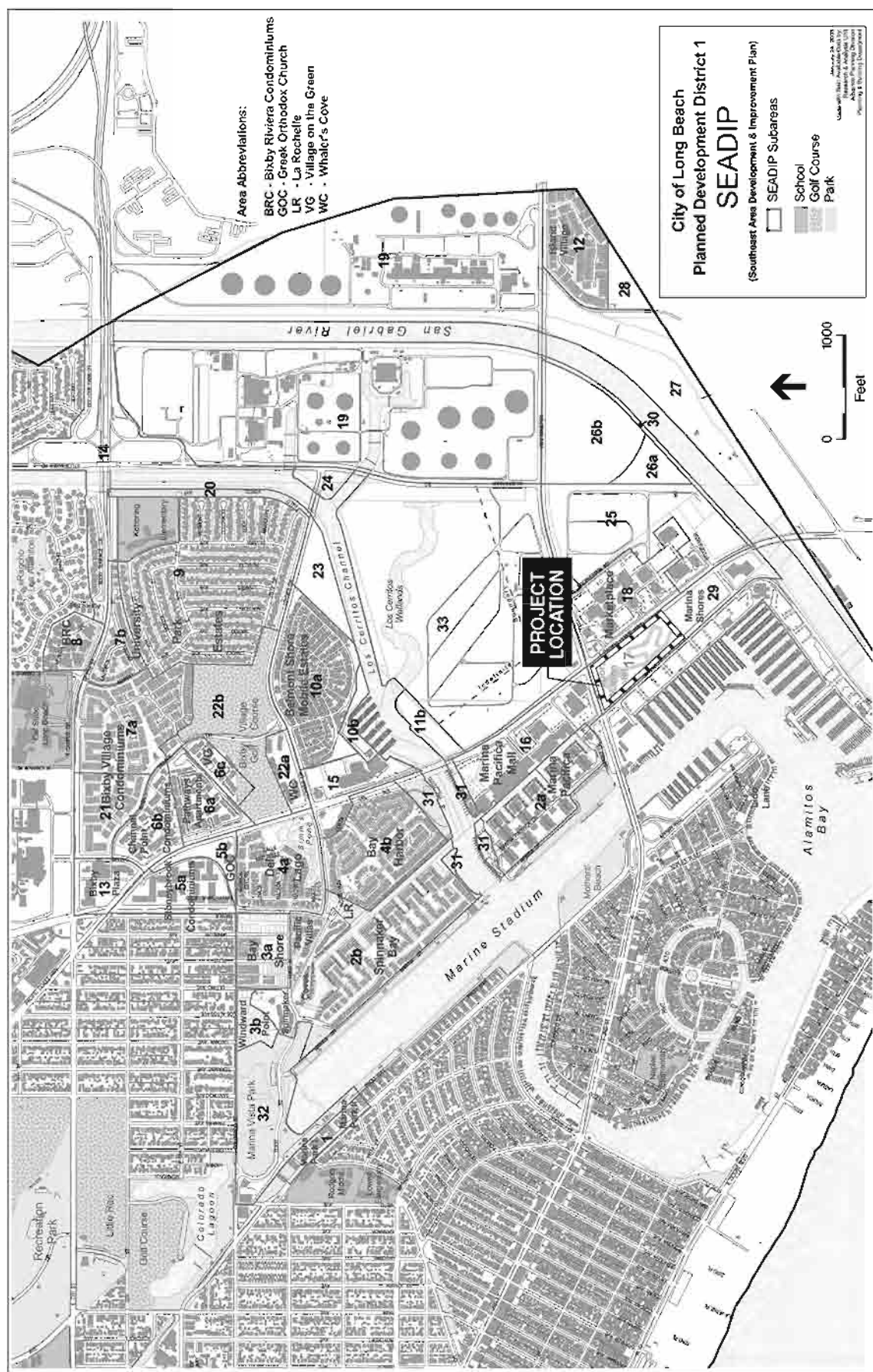
Zoning

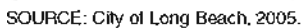
Zoning is the division of a City into districts and the application of development regulations specific to each district. The City Zoning Ordinance includes regulations indicating where and under what conditions a business may operate in the City.

The zoning ordinance and zoning designations of the land are primary tools implementing the City's General Plan. The project site is in the PD-1 (SEADIP) Subarea 17 zoning district (see **Figures 3G.2 and 3G.3**). Subarea 17 is fully developed with commercial and service uses. As indicated in the zoning code, the proposed project requires site plan review and approval as part of overall project approvals. The site plan review process helps guide the design of new projects to ensure compatibility between new development and existing neighborhoods in terms of scale, style, and construction materials.

As a zoning district, PD-1 provides for a mixed-use community of residential, business, and light industrial uses integrated by an extensive system of parks, open space, and trails. Provisions found in PD-1 (SEADIP) that are related to the proposed project include:

- Provision A.4: A minimum of 30 percent of the site shall be developed and maintained as usable open space.
- Provision A.6: Minimum parking for each residential unit shall be the same as required Citywide by the zoning regulations; except that, in that part of SEADIP within the coastal zone, coastal zone standards shall apply. Minimum parking for commercial and industrial uses shall be provided in accordance with parking standards as specified in the zoning regulations.





- Provision A.8: All development shall be open and inviting to the public; the public shall not be excluded from use of private streets and bicycle and pedestrian trails.
- Provision A.9: All development shall be designed and constructed to be in harmony with the character and quality of surrounding development so as to create community unity within the entire area.
- Provision A.10: Developers shall construct public open space, trails, pathways and bicycle trails for each development in such a manner that they will be generally accessible to the public and that they will interconnect with similar facilities in adjacent developments so as to form an integrated system of open space and trails connecting major points of destination.
- Provision A.12: Public views to water areas and public open spaces shall be maintained and enhanced to the maximum extent possible, consistent with the wetlands restoration plan.
- Provision A.13: Adequate landscaping and required irrigation shall be provided to create a park like setting for the entire area. A landscaped parkway area shall be provided along all developments fronting on PCH, Westminster Avenue, Studebaker Road, Seventh Street and Loynes Drive.
- Provision A.14: No additional curb cuts shall be permitted on PCH, Westminster Avenue, Studebaker Road, or Seventh Street unless it can be shown that inadequate access exists from local streets or unless specifically permitted by Subarea regulations provided herein. This restriction shall not preclude the provision of emergency access from these streets as may be required by the City.
- Provision A.15: All utility lines shall be placed underground and utility easements shall be provided as required unless waived by the Commission on the advice of the Director of Public Works.
- Provision A.16: Developers shall construct, in accordance with plans approved by the Director of Public Works, all necessary sanitary sewers to connect with existing public sewers, and shall provide easements to permit continued maintenance of these sewers by the City where the City accepts responsibility for such maintenance.
- Provision A.17: Developers shall construct, in accordance with plans approved by the Director of Public Works, all new streets and ways within the area.

3G.3 Environmental Impacts and Mitigation Measures

Methodology

Land use impacts are assessed based upon the physical effects related to land use compatibility (for example, air quality, aesthetics, and circulation) and consistency with adopted plans and regulations. Specifically, this section of the EIR addresses the potential environmental impacts related to compatibility and/or consistency with regard to on-site and adjacent land uses and the following plans and regulations:

- Citywide Strategic Plan

- City of Long Beach General Plan Element
- LCP
- City of Long Beach Zoning
- City-established Guiding Principles for the project

Information obtained from site visits was used to analyze specific physical impacts of the proposed project for potential land use compatibility impacts.

Significance Criteria

The criteria used to determine the significance of an impact are based on the Initial Study Checklist in Appendix G of the *CEQA Guidelines* and City precedent. Several criteria were eliminated from further consideration, because the proposed project would not divide an established community or conflict with any applicable habitat conservation plan/natural community conservation plan. These issues therefore, will not be discussed here. Please refer to the Initial Study (Appendix A) for further clarification.

For this analysis, the proposed project may result in significant impacts if it would:

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coast program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Project Impacts

Impact 3G.1: Could implementation of the proposed project conflict with an existing land use plan?

Citywide Strategic Plan

Long Beach 2010, the Citywide Strategic Plan, includes several goals specific to housing, economic and business development in the City of Long Beach. As described below, the proposed project would further the intent of these goals:

Goal: *Improve the quality and availability of housing.*

Project: The proposed project would provide 425 upscale housing units in the City of Long Beach and therefore addresses this goal.

Goal: *Encourage business development based on our strengths.*

Project: The proposed project would encourage business development by providing 170,000 square feet of new retail space on an underdeveloped site and addresses this goal.

Goal: *Balance business growth and neighborhood needs.*

Project: The proposed project would balance business growth and neighborhood needs by providing retail and residential land uses, which would serve the needs of the local residents, businesses, and employers in southeast Long Beach. As noted elsewhere, the provision of mixed-uses is intended to provide housing as well as support services for industries and employees. The proposed project addresses this goal.

The proposed project addresses goals of the Citywide Strategic Plan in terms of providing more high-quality housing and retail land uses, thereby balancing business growth with neighborhood needs.

General Plan

The General Plan articulates a vision that gives direction to the long-range development of the City. As previously stated, the proposed project site is designated in the General Plan as LUD No. 7, Mixed Use. LUD No. 7 is intended for the careful and synergistic blending of different types of land use to vitalize an area and to support urban structure.

The proposed project, a mixed-use community consisting of residential and retail land uses, is consistent with the current General Plan designation for the site. The proposed project would provide needed residential uses and provide for retail opportunities on an underutilized property.

Section 3G.2.1 identifies three goals of the General Plan Land Use Element that are applicable to the proposed project site. As outlined below, the proposed project furthers the intent of these goals:

Managed Growth: *Guide growth to have an overall beneficial impact upon the City's quality of life.*

Project: The proposed project represents infill of land that is underutilized. The proposed project would increase retail and housing land uses the City and is, therefore, consistent with this goal.

Economic Development: *Long Beach will pursue economic development.*

Project: The proposed project would be a sales and property tax-generating use for the City. Implementation of the proposed project would result in a potentially economically viable development on an underutilized site. The project addresses the economic development goal of the City, because it provides a benefit to the City's residents in terms of tax generation.

New Housing Construction: *In the immediate future, the emphasis should be on for-sale housing for first-time home buyers and upon upscale residential development.*

Project: The proposed project includes 425 for-sale upscale residential units including lofts, townhomes, and flats that address the new-housing construction goal of the City.

The proposed project would be an infill development that includes both retail and residential land uses that address the above goals identified in the LUE of the General Plan.

Local Coastal Program

Although the proposed project would require a LCP Amendment to allow for construction and operation of residential uses, it would be consistent with the following LCP policies:

LCP III-S-5: Development of the subject area must be comprehensive and integrated, with a balance sought between the issues of land use, density, traffic, environmental issues, and fiscal impacts.

Project: The proposed project would be a comprehensive integrated development that includes mitigation measures to address any outstanding environmental issues. Further, the proposed project is consistent with the concept of fiscal responsibility. As the project is privately funded, it would result in a low development cost burden to the City and residents of Long Beach.

LCP III-S-6: Higher densities (above 7.26 dwelling units per acre) are warranted only when supported by amenities provided to the public without cost, adequate open space is preserved, participation in an internal bicycle path and pedestrian trail system is guaranteed, and private streets are utilized to remove circulation burdens from public thoroughfares.

Project: The proposed project would have 39 dwelling units and approximately 15,600 square foot of retail per acre. It would include amenities for the public consisting of bike and pedestrian trails and outdoor plazas (see Section 2B), in addition to the retail component that would be utilized by the public. As stated above, the project is privately funded, including the proposed public amenities.

LCP III-S-6: Traffic considerations include limited access to major streets, improved local circulation, preventing streets or circulation patterns from disrupting existing neighborhoods, improving traffic flow on PCH and Studebaker Road, and controlling the number of dwelling units so as to minimize traffic impact.

Project: The proposed project includes improvements to surrounding roadways and measures to mitigate project-related impacts (see Section 3L, Transportation and Circulation). The proposed project would also include two internal private streets.

LCP III-S-6: Environmental considerations of special significance include seismic safety, water protection, problems of uncontrolled landfill, methane gas generated in

landfill, wildlife protection, the impact of traffic, preserving unique natural habitats, and the landfill requirements for many vacant areas.

Project: The proposed project would be developed in accordance with proper engineering design standards and in accordance with CBC requirements and would therefore not result in significant seismic safety impacts (see Section 3D, Geology and Soils). In addition as stated above, the proposed project includes improvements to surrounding roadways and measure to mitigate project-related impacts (see Section 3L. Transportation and Circulation).

LCP II-3: *A primary objective of the LCP is the prevention of traffic intrusion into residential neighborhoods while improving access to the downtown area and the coastline.*

Project: As stated above, the proposed project includes improvements to surrounding roadways and measure to mitigate project-related impacts (see Section 3L. Transportation and Circulation).

Zoning

Section 3G.2 identifies several provisions from PD-1 (SEADIP) that are applicable to the proposed project.

Provision A.4: *A minimum of 30 percent of the site shall be developed and maintained as useable open space.*

Project: Approximately 20 percent of the project site would be open space. The proposed project would not fully satisfy this PD-1 (SEADIP) provision. Although the proposed project does not completely provide for the open space requirements, the proposed project includes the following open space areas into site design and off-site areas:

- One public plaza along Second Street and two along Marina Drive
- A landscaped Class 1 bike trail and a six-foot pedestrian sidewalk on the southwest side of Marina Drive (from Second Street to Studebaker) and improvements to pedestrian sidewalks.
- Extension of an off-street bike trail and a six-foot pedestrian sidewalk and crossing to Studebaker Road on the southwest side of Marina Drive.
- In addition, the project includes landscape improvements to off-site public areas along Marina Drive and throughout the marina parking lot, west of the site.

As discussed in the project description and below, the project would require a standards variance to address this issue.

Provision A.6: Minimum parking for each residential unit shall be the same as required Citywide by the zoning regulations; except that, in that part of SEADIP within the coastal zone, coastal zone standards shall apply. Minimum parking for commercial and industrial uses shall be provided in accordance with parking standards as specified in the zoning regulations.

Project: The proposed project would provide on-site residential parking and shared guest and retail parking. The number of parking spaces provided would be as required by the City code.

Provision A.8: All development shall be open and inviting to the public; the public shall not be excluded from use of private streets and bicycle and pedestrian trails.

Project: The project site design includes landscaping along the main project entrance and a landscaped trail along Marina Drive to promote public access. Two private streets are included as part of the proposed project.

Provision A.9: All development shall be designed and constructed to be in harmony with the character and quality of surrounding development so as to create community unity within the entire area.

Project: The landscaping and multiple-use path along the pedestrian promenade tie into the multiple-use path along Marina Drive. The promenade includes amenities and outdoor seating for community use. In addition, the project would allow community use of the project site for retail purposes that are similar to the adjacent retail uses. Retail land uses in the already established retail area would provide additional support services and amenities to surrounding areas as well as connectivity to them, including the neighborhoods and communities of Long Beach.

Provision A.10: Developers shall construct public open space, trails, pathways and bicycle trails for each development in such a manner that they will be generally accessible to the public and that they will interconnect with similar facilities in adjacent developments so as to form an integrated system of open space and trails connecting major points of destination.

Project: The proposed development provides multiple-use paths along PCH, Second Street, and Marina Drive that would allow pedestrian and bicyclists to access the project site; cross at the signalized intersection on Marina Drive; and connect to the existing trail at Second Street and Marina Drive.

Provision A.12: Public views to water areas and public open spaces shall be maintained and enhanced to the maximum extent possible, consistent with the wetlands restoration plan.

Project: The proposed project would include view corridors on two internal private streets. The views would be to the east and west, beyond PCH and Marina Drive. The Marina Drive side of the project would provide views of the Alamitos Bay Marina.

Provision A.13: Adequate landscaping and required irrigation shall be provided to create a park-like setting for the entire area. A landscaped parkway area shall be provided along all developments fronting on PCH, Westminster Avenue, Studebaker Road, Seventh Street and Lyones Drive.

Project: The project includes landscaping throughout the site. In addition, the project includes off-site landscaping along Marina Drive from Second Street to Studebaker Road and throughout the City-owned marina parking lot located west of the project site. The on- and off-site landscape improvements would provide shade and a park-like setting within the project area.

Provision A.14: No additional curb cuts shall be permitted on PCH, Westminster Avenue, Studebaker Road, or Seventh Street unless it can be shown that inadequate access exists from local streets or unless specifically permitted by Subarea regulations provided herein.

Project: Inadequate access to the project site currently exists. The proposed project would relocate and improve the primary access on PCH (widen the drive entrance; include a traffic signal; and provide a transition lane at Second Street, two through lanes, and a deceleration/acceleration lane).

Provision A.15: All utility lines shall be placed underground and utility easements shall be provided as required unless waived by the Commission on the advice of the Director of Public Works.

Project: Existing and proposed utility lines on site would be underground, removed, or relocated.

Provision A.16: Developers shall construct, in accordance with plans approved by the Director of Public Works, all necessary sanitary sewers to connect with existing public sewers, and shall provide easements to permit continued maintenance of these sewers by the City where the City accepts responsibility for such maintenance.

Project: Pursuant to City Sewer Master Plans, a sewer station and force main that would be connected to an existing public sewer are proposed in conjunction with development of the site.

Provision A.17: Developers shall construct, in accordance with plans approved by the Director of Public Works, all new streets and ways within the area. All streets and ways will include the following:

- a. Roadway pavement, curbs and sidewalks approved by the Director of Public Works. The sidewalk may be combined with an enlarged bicycle trail in such*

cases where the Commission and the Director of Public Works determine that an independent sidewalk is not required for pedestrian convenience and safety.

- b. Water lines approved by the General Manager of the Water Department.*
- c. Fire hydrants approved by the Fire Chief and the General Manger of the Water Department.*
- d. Street lighting using low-energy luminaries, as approved by the Director of Public Works.*
- e. Storm drainage approved by the Director of Public Works.*
- f. Street trees approved by the Director of Public Works.*
- g. Street signs and pavement traffic markings approved by the Director of Public Works.*
- h. All traffic control devices required by the Director of Public Works.*

Project: The proposed project includes on-and off-site roadway improvements including installation of pavement and sidewalks, as required. The Director of Public Works and the Long Beach Traffic Engineer would oversee all roadway improvements and installation of street signs, pavement traffic markings, and traffic control devices. The proposed project includes a landscaped trail and a sidewalk along PCH, Second Street, and Marina Drive. The on-site water system would be maintained by the project applicant and would be constructed to meet Long Beach Planning and Building standards. Fire hydrants would be installed to meet Long Beach Fire Department and Long Beach Water Department standards. All on-site lighting would be subject to a Lighting Plan approved by the City of Long Beach Director of Planning and Building.

The City established Guiding Principles for the proposed project to follow. The extent to which the proposed project is consistent with the Guiding Principles is described below:

Principle 1: *The City will work with the applicant to create a vibrant retail center on the site. The City acknowledges that as part of this project, housing may be permitted, provided, however, that the housing is developed concurrently with the retail center, and that a truly integrated mixed-use project results.*

Project: The proposal succeeds in integrating the residential and retail components of the project. However, in keeping with the principle of creating a vibrant retail center, the City believes that the proposal should provide a more prominent retail presence, particularly at and near the corner of Second Street and PCH. The current proposal is expressed primarily as a residential project from all vantage points.

Principle 2: *The project should strive to meet public open space objectives currently set forth in SEADIP and consistent with the spirit and intent of the Parks, Recreation, and Marine Department's 2003 Strategic Plan.*

Project: The submittal does not meet the 30 percent open space requirement set forth in SEADIP, but provides approximately 20 percent open space. The City has worked extensively with the applicant on the open space plan, and is satisfied with the overall open space concept, irrespective of the resultant amount of open space provided. The open space concept proposed is a series of open spaces, which include public plaza areas along Second Street and Marina Drive. Walkway areas connect the plazas and provide pedestrian access through the site. The residential levels have both passive and active open space areas that include pool areas, landscaped planters, and hardscaped areas.

The quality of design is critical to the proper functioning of this open space, and the current project is not developed to a level that allows the City to make a clear evaluation. The City will continue to work with the applicant on the details of the open space plan as the project proceeds through the entitlement process.

Principle 3: The City will work with the applicant to ensure an aesthetically attractive, high quality design that reflects the property's unique orientation near a wetlands open space resource and adjacent to an active marina.

Project: The site is laid out as a series of buildings, with two internal private streets dividing the site into three blocks. The streets provide both vehicular and pedestrian access to and through the site. The project provides retail frontage on both the internal private streets and the public streets abutting the site. The north block and center block provide the bulk of the commercial space, while the southern block has limited commercial space and ground floor residential use. Three levels of residential use are proposed atop the ground floor uses on all three blocks.

The proposed architectural design is of a contemporary style that uses a variety of materials and horizontal elements including canopies and architectural projections to create some variation in the building massing. However, although the site plan configuration breaks up the project into separate elements, the architectural expression throughout the project is rather homogeneous. This visual and experiential impact of a single project extending across the site, rather than a collection of places, streets and buildings which the site plan tends to indicate. The lack of significant variation in the overall massing in both the horizontal and vertical elements, in addition to the repetitive use of articulation, size of window and door openings and patterns creates a bulky and homogenous look that is more representative of an institutional building as opposed to a vibrant mixed-use development on a very unique site.

While the layout of the project succeeds in maximizing views of the adjacent marina, the overall design is not unique to the project site, but rather has a generic look that fails to account for the unique site characteristics or the unique location of the site near a marina and at a prominent intersection of the City. The design should be revised to better accentuate the unique characteristics of the site, which include the

location of the site on multiple street frontages, proximity to the marina, and the major intersection at the northeast corner of the site.

***Principle 4:** The City will work with the applicant to ensure that appropriate mitigation measures are adopted to ameliorate traffic conditions near and around the project site.*

Project: This guiding principle is addressed in Section 3L. Transportation and Circulation. As discussed in Section 3L, project related traffic effects can be mitigated to a less than significant level except where indicated, while cumulative traffic effects are significant and unavoidable.

***Principle 5:** The project should strive to provide a high level of accessibility to and through the site. A well-defined circulation pattern will ensure a high-quality pedestrian environment, efficient vehicular access, and access to mass transit.*

Project: The City believes that the proposed project has succeeded in providing a high level of accessibility to and through the site. The project incorporates two private streets through the project, which provide both vehicular and pedestrian access. In addition, the site has frontage on three public streets; all three provide pedestrian access to the site, while two (PCH and Marina Drive) provide vehicular access. Paseos, courtyards, and other open space areas assist in creating an environment amenable for pedestrian access through the site. Access to mass transit is available from stops located on both PCH and Marina Drive.

Conclusion: With the required discretionary applications, the proposed project would not conflict with the Citywide Strategic Plan, General Plan or LCP. However, the proposed project's inconsistency with PD-1 (SEADIP) open space requirements is a potentially significant impact of the proposed project. Approval of the project, including its off-site landscaping would indicate the decision makers acceptance of the project and proposed off-site improvements, and a less than significant impact. As previously stated, the overall intent of the PD-1 (SEADIP) zoning district is to provide a community of residential, business, and light industrial uses integrated with a system of parks, open space, and trails. The proposed project substantially complies with the open space standard, integrating usable open space into the site design. The landscaping along PCH and Marina Drive is in excess of the required setback and includes bike trails and a promenade. The proposed project would require Amendments to allow for residential land uses and Standards Variances for the less than the required setback along Second Street and for less than the required amount of open space. The City-established Guiding Principles have been incorporated to reinforce the project goals and identify the areas where the proposed project should continue to evolve. Those areas include: creating a more defined retail component, providing further details about the open space plan and further accentuating the project's unique location and the potential for it to become a destination through its architectural design. The following mitigation measure

is included to ensure that all of the Guiding Principles are realized in the planning and design of this gateway project

Mitigation: Prior to the issuance of any building permit, the applicant shall continue to work with City staff to address and satisfy the established Guiding Principles to the satisfaction of the Planning Commission.

Significance After Mitigation: Less than significant.

Cumulative Impacts

Impact 3G.2: Could the proposed project result in an adverse cumulative land use impact?

This analysis is based on the cumulative projects list provided in Chapter 2. The listed projects include various commercial, retail, mixed use and residential projects located in the vicinity of the project site. The related projects, as with the proposed project, are all subject to the City's plans and policies. The approval process is to ensure that there are no conflicts between the related projects and applicable plans, and policies governing the sites. Because the proposed project would not conflict with applicable plans and policies (with the required discretionary approvals), the incremental impact of the proposed project when considered with the related projects would not cause a significant impact.

Conclusion: The proposed project would not contribute to an adverse cumulative land use impact.

Mitigation: None required.

Significance After Mitigation: Less than significant.

3H. Noise

This section presents information on ambient noise conditions in the vicinity of the project site, identifies potential impacts associated with noise and vibration due to the construction and operation of the proposed project, as well as potential effects on the prospective residents and employees of the proposed project. The technical report is included as Appendix C of this document.

Noise Definition

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The decibel (dB) scale is used to quantify sound intensity. Since the human ear is not equally sensitive to all frequencies within the entire spectrum, noise measurements are weighted more heavily within those frequencies of maximum human sensitivity in a process called “A-weighting,” referred to as dBA. In general, a difference of more than 3 dBA is a perceptible change in environmental noise, while a 5 dBA difference typically causes a change in community reaction. An increase of 10 dBA is perceived by people as a doubling of loudness.¹

Because sound pressure can vary by over one trillion times within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level. Therefore, the cumulative noise level from two or more sources will combine logarithmically, rather than linearly (i.e., simple addition). For example, if two identical noise sources produce a noise level of 50 dBA each, the combined noise level would be 53 dBA, not 100 dBA.

Time variation in noise exposure is typically expressed in terms of the average energy over time (L_{eq}), or alternatively, as a statistical description of the sound level that is exceeded over some fraction of a given period of time. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. This is, for example, the level that is exceeded 30 minutes in an hour.

Several methods have been devised to relate noise exposure over time to human response. A commonly used noise metric for this type of study is the Community Noise Equivalent Level (CNEL). The CNEL, originally developed for use in the California Airport Noise Regulation, adds a five dBA penalty to noise occurring during evening hours from 7 PM to 10 PM, and a ten dBA penalty to sounds occurring between the hours of 10 PM to

¹ USEPA, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, March 1974.

7 AM to account for the increased sensitivity to noise events that occur during the quiet late evening and nighttime periods. Thus, the CNEL noise metric provides a 24-hour average of A-weighted noise levels at a particular location, with an evening and a nighttime adjustment, which reflects increased sensitivity to noise during these times of the day.

Figure 3H.1 displays typical sound levels measured in the environment and the subjective human response to the various intensities of noise.

Vibration Definition

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the affect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (vdb) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration.² Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Man-made vibration issues are therefore usually confined to short distances (i.e., 500 feet or less) from the source. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly and sick), and vibration sensitive equipment.

3H.1 Environmental Setting

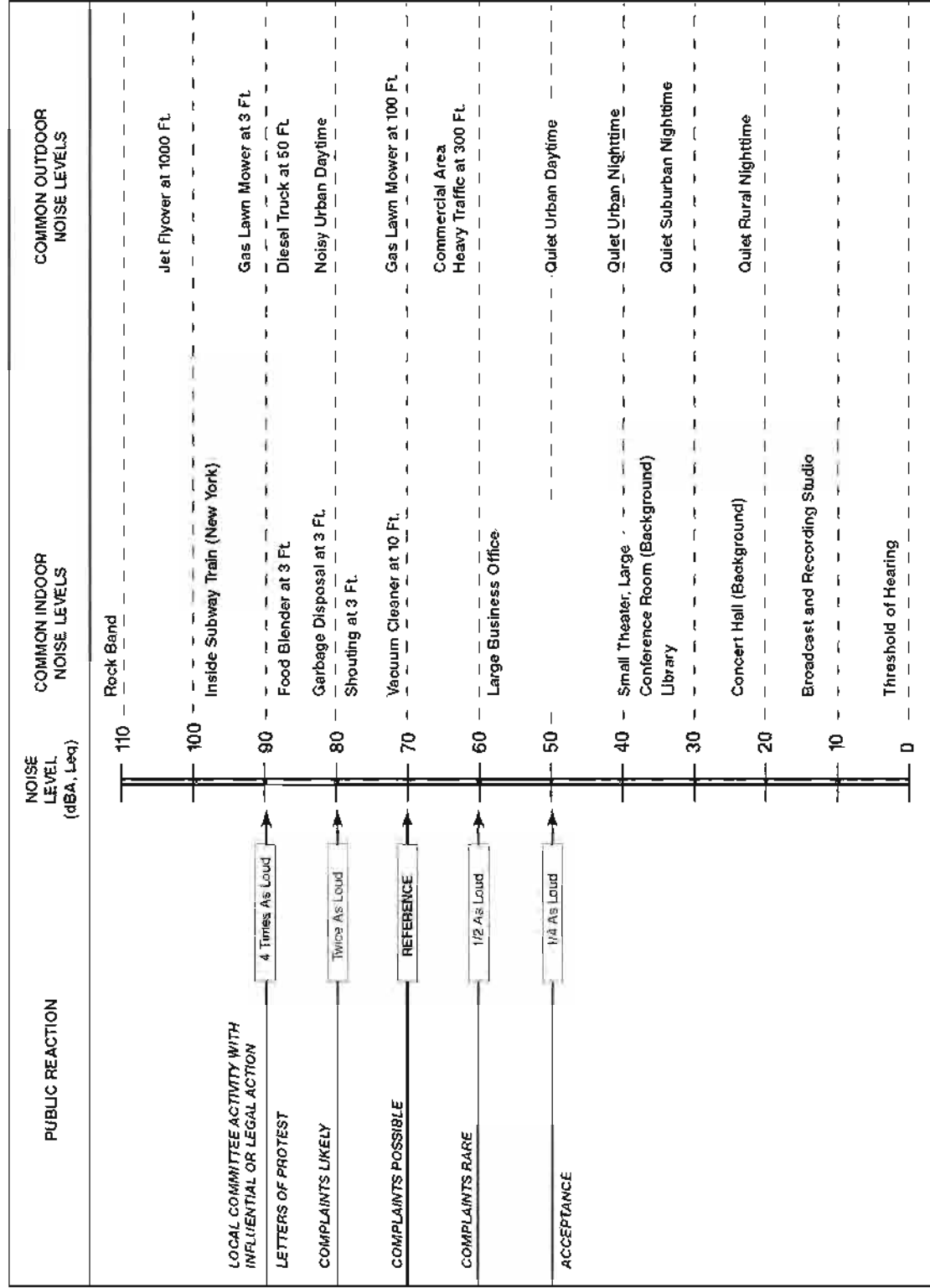
Existing Noise Sources

The predominant noise source in the project area is roadway noise from PCH. Other community noise sources include incidental noise from nearby existing commercial uses and activities at the marina.

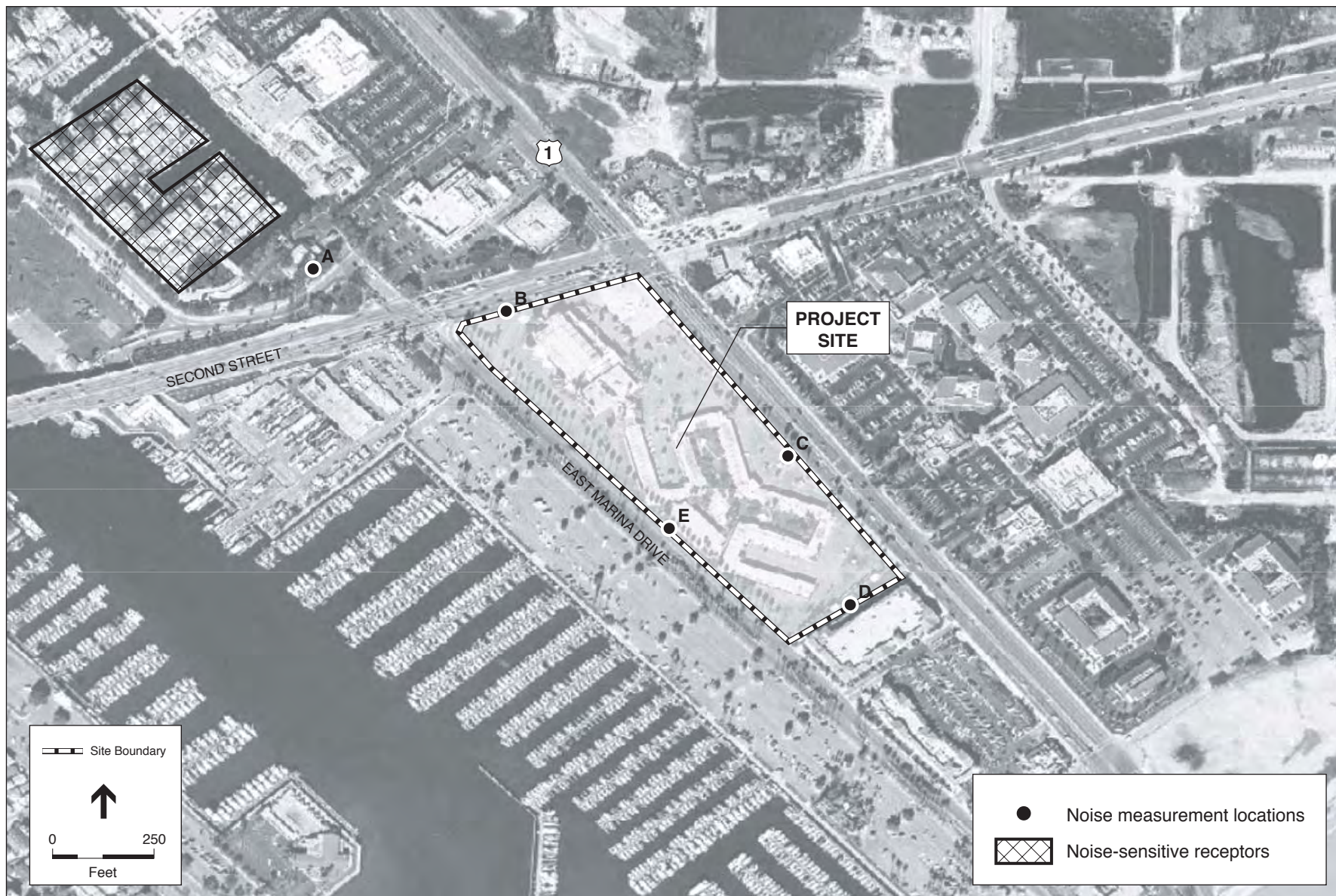
Noise monitoring was conducted on June 1, 2005 to ascertain the existing ambient daytime noise levels near the proposed project site.³ The measurement locations, along with sensitive receptor locations, are presented in **Figure 3H.2**. A summary of noise measurement data is provided in **Table 3H.1**. As shown, ambient noise levels near the project site ranged from 59.1 to 71.1 dBA L_{eq} (15 minute).

² Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, April 1995.

³ Noise levels were measured on June 1, 2005 using a calibrated Metrosonic dB-308A Sound Analyzer.



SOURCE: Calltrans Transportation Laboratory Noise Manual, 1982; and Modification by ESA.



SOURCE: GlobeXplorer, 02-01-2005; ESA, 2006.

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Figure 3H.2
Measurement Locations
and Noise-Sensitive Receptors

**TABLE 3H.1
SUMMARY OF AMBIENT NOISE MEASUREMENT DATA**

| Location | Start Time | Duration | 15 Minute Average (dBA, Leq) | Existing Noise Sources |
|--|------------|------------|---------------------------------|---------------------------|
| A – Single-family residences on Marina Drive | 9:45 AM | 15 minutes | 64.0 | Traffic |
| B – Second Street | 11:20 AM | 15 minutes | 66.6 | Traffic |
| C – PCH | 11:40 AM | 15 minutes | 71.1 | Traffic |
| D – Southern boundary of project site | 10:33 AM | 15 minutes | 59.1 | Traffic |
| E – Marina Drive along western project boundary | 10:53 AM | 15 minutes | 65.6 | Traffic |

SOURCE: ESA, 2005.

To further characterize existing noise levels in the project area, traffic noise was modeled using the Caltrans *Traffic Noise Analysis Protocol*⁴ and *Technical Noise Supplement*⁵ and traffic volumes provided in the traffic study.⁶ **Table 3H.2** summarizes traffic noise modeling results for the existing conditions. As shown, the calculated CNEL for the analyzed roadway segments as a result of existing traffic volumes ranged from 61.6 to 71.5 dBA CNEL at a distance of 50 feet from the roadway right-of-way. Modeled traffic noise levels are typically lower than ambient noise measurements, as the modeled traffic noise does not account for other community noise sources or attenuation.

Existing Vibration Sources

Similar to the environmental setting for noise, the vibration environment is dominated by traffic from nearby roadways. Heavy trucks can generate groundborne vibrations that vary depending on vehicle type, weight, and pavement conditions. As heavy trucks typically operate on major streets, existing groundborne vibration in the project vicinity is largely related to heavy truck traffic on PCH and Second Street. Vibration levels adjacent to this roadway are typically not perceptible.

Sensitive Receptors

Noise-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise-sensitive.

⁴ Caltrans, *Traffic Noise Analysis Protocol for New Highway Construction and Highway Reconstruction Project*, October 1998.

⁵ Caltrans, *Technical Noise Supplement*, October 1998.

⁶ Meyer, Mohaddes Associates, *Seaport Marina Project Traffic Impact Report*, 2006.

TABLE 3H.2
MODELED EXISTING TRAFFIC NOISE LEVELS

| Roadway Segment | Sound Level at 50 feet from Roadway Right-of- Way (CNEL) ^{a,b} | Sound Level at 75 feet from Roadway Right-of- Way (CNEL) ^{a,b} | Sound Level at 100 feet from Roadway Right-of- Way (CNEL) ^{a,b} |
|--|--|--|---|
| PCH between Loynes Drive and Second Street | 70.6 | 69.5 | 68.6 |
| PCH between Second Street and Studebaker Road | 70.6 | 69.6 | 68.8 |
| PCH between Studebaker Road and Marina Drive | 71.1 | 70.0 | 69.1 |
| Second Street west of Livingstone Drive | 61.6 | 60.6 | 59.8 |
| Second Street between Livingstone Drive and Bay Shore Avenue | 69.0 | 67.9 | 67.0 |
| Second Street between Bay Shore Avenue and Naples Plaza | 69.4 | 68.6 | 687.9 |
| Second Street between Naples Plaza and Marina Drive | 71.5 | 70.4 | 69.5 |
| Marina Drive between Second Street and Studebaker Road | 65.2 | 64.1 | 63.3 |

^a The predicted CNEL were calculated as peak hour L_{eq} and converted into CNEL using Caltrans *Technical Noise Supplement* (October 1998). The conversion involved making a correction for peak hour traffic volumes as a percentage of ADT and a correction for the nighttime penalties. The peak hour traffic was assumed to be ten percent of the average daily traffic.

^b The highest AM, PM, or weekend CNELs are presented for each segment.

SOURCE: ESA, 2006.

Figure 3H.2 shows the location of sensitive receptors near the project site. The nearest sensitive receptors to the project site are residences located along Marina Drive north of Second Street, approximately 600 feet from the project site.

3H.2 Regulatory Background

Federal

Federal Noise Policies. The U.S. Department of Housing and Urban Development (HUD) has set a goal of 45 dBA L_{dn} as a desirable maximum interior noise standard for HUD-assisted residential units.⁷ This same noise level is also generally accepted within the State of California.

Federal Vibration Policies. The Federal Railway Administration (FRA) and the Federal Transit Administration (FTA) have published guidance relative to vibration impacts. According to the FRA, fragile buildings can be exposed to groundborne vibration levels

⁷ The L_{dn} and the CNEL are similar noise descriptors and rarely differ by more than one dBA.

of 0.5 PPV without experiencing structural damage.⁸ The FTA has identified the human annoyance response to vibration levels as 80 VdB.⁹

State

State Noise Policies. DHS has adopted guidelines based, in part, on the community noise compatibility guidelines established by the DHS for use in assessing the compatibility of various land use types with a range of noise levels.¹⁰ These guidelines are presented in **Figure 3H.3**. An exterior noise level up to 65 dBA CNEL is “normally acceptable” for multi-family residential uses, without special noise insulation requirements. A noise level of 65 to 70 dBA CNEL or more is identified as “conditionally acceptable” for multi-family residential uses. A “conditionally acceptable” designation indicates that conventional construction, with closed windows and fresh air supply systems (e.g., air conditioning) normally suffice for noise insulation. A noise level of 70 to 75 dBA CNEL is identified as “normally unacceptable” for multi-family residential uses and requires an analysis to demonstrate potential noise mitigation measures.

State Vibration Policies. There are no adopted state policies or standards for groundborne vibration. Caltrans does recommend that extreme care be taken when sustained pile driving occurs within 7.5 meters (25 feet) of any building, and 15 to 30 meters (50 to 100 feet) of a historic building or a building in poor condition.

Local

City Noise Policies. Chapter 8.80 of the Long Beach Municipal Code controls unnecessary and excessive noise and vibration in the City of Long Beach. Section 8.80.202 regulates construction noise. It states that it is unlawful for any person to perform construction activities where a building or other related permit is required or was issued by the building official between the hours of 7 PM and 7 AM during weekdays, before 9 AM or after 6 PM on Saturday, and any time on Sunday or federal holidays.

Regarding operations noise, Section 8.80.150 of the Long Beach Municipal Code outlines acceptable exterior noise levels by land use. As shown in **Table 3H.3**, daytime noise levels at residential areas are not to exceed 50 dBA.





In addition, it is unlawful for any person to create any noise which causes the noise level when measured on residential property to exceed:

- The noise standard for that land use district as shown in Table 3H.3 for a cumulative period of more than thirty minutes in any hour;

⁸ Federal Railway Administration, *High-Speed Ground Transportation Noise and Vibration Impact Assessment*, December 1998.

⁹ Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, April 1995.

¹⁰ California Department of Health Services, Office of Noise Control, February 1976.

| Land Use Category | Community Noise Exposure | | | | | |
|---|-------------------------------|---|----|----|----|----|
| | 55 | 60 | 65 | 70 | 75 | 80 |
| | L _{dn} or CNEI (dBA) | | | | | |
| Residential—low-density single-family, duplex, mobile homes | | | | | | |
| Residential—multiple family | | | | | | |
| Transient lodging – motels, hotels | | | | | | |
| Schools, libraries, churches, hospitals, nursing homes | | | | | | |
| Auditoriums, concert halls, amphitheaters | | | | | | |
| Sports area, outdoor spectator sports | | | | | | |
| Playgrounds, neighborhood parks | | | | | | |
| Golf courses, riding stables, water recreation, cemeteries | | | | | | |
| Office buildings, business commercial and professional | | | | | | |
| Industrial, manufacturing, utilities, agriculture | | | | | | |
| INTERPRETATION: | | | | | | |
|  Normally acceptable Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements. | |  Normally unacceptable New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. | | | | |
|  Conditionally acceptable New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction with closed windows and fresh air supply systems or air conditioning will normally suffice. | |  Clearly unacceptable New construction or development should generally not be undertaken. | | | | |

SOURCE: California Department of Health Services, Office of Noise Control, February 1976.

Long Beach Marina EIR . 204452
Figure 3H.3
Land Use Compatibility Matrix

**TABLE 3H.3
CITY OF LONG BEACH EXTERIOR NOISE LIMITS BY RECEIVING LAND USE**

| Receiving Land Use District ^a | Time Period | Noise Level (dBA) | Steady Audible Tone |
|--|--------------------------------------|-------------------|---------------------|
| District One – predominately residential with other land use types also present | Night: 10 PM – 7 AM | 45 | 40 |
| | Day: 7 AM – 10 PM | 50 | 45 |
| District Two – predominately commercial with other land use types also present | Night: 10 PM – 7 AM | 55 | 50 |
| | Day: 7 AM – 10 PM | 60 | 55 |
| District Three – predominately industrial with other land use types also present | Any time | 65 | 60 |
| District Four – predominately industrial with other land use types also present | Any time | 70 | 65 |
| District Five – airports, freeways, and waterways regulated by other agencies | Regulated by other agencies and laws | | |

^a Noise districts are defined in Section 8380.160 of the Long Beach Municipal Code.

SOURCE: Long Beach Municipal Code, Section 8.80.160.

- The noise standard plus five dBA for more than 15 minutes in any hour;
- The noise standard plus ten dBA for a cumulative period of more than five minutes in any hour;
- The noise standard plus 15 dBA for a cumulative period of more than one minute in any hour; or

The noise standard plus 20 dBA or the maximum measured ambient, for any period of time. If the measured ambient level exceeds that permissible, the allowable noise exposure standard shall be increased in 5 dBA increments in each category as appropriate to encompass or reflect the ambient noise level. In addition, Section 8.80.160 of the Long Beach Municipal Code states that, in the event an alleged offensive noise contains a steady audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting or contains music or speech conveying informational content, the standard limits should be reduced by 5 dBA.

The City of Long Beach has established interior noise standards for various land uses. As shown in **Table 3H.4**, the interior daytime noise level for residences should not exceed 45 dBA.

Other noise regulations relevant to the proposed project include the limitation on the operation of any mechanically powered saw, sander, drill, grinder, lawn or garden tool, or similar tool between 10 PM and 7 AM and the limitation of refuse vehicle activity between 7 PM and 7 AM in residential areas.

**TABLE 3H.4
CITY OF LONG BEACH INTERIOR NOISE LIMITS BY RECEIVING LAND USE**

| Receiving Land Use District | Time Period | Noise Level (dBA) | Steady Audible Tone |
|--|-------------|---|---------------------|
| All | Residential | 10 PM – 7 AM | 35 |
| | | 7 AM – 10 PM | 45 |
| All | School | 7 AM – 10 PM (while school in session) | 45 |
| Hospitals, designated quiet zones, and noise sensitive zones | | Any time | 40 |

SOURCE: Long Beach Municipal Code, Section 8.80.170.

City Vibration Policies. The City of Long Beach has not adopted standards for groundborne vibration associated with construction activities. Section 8.80.200.G of the Long Beach Municipal Code limits operational groundborne vibration. This section prohibits the operation of any device that creates vibration above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at 150 feet from the source if on a public space or public right-of-way. The vibration perception threshold is defined as the minimum groundborne or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration by such directed means as sensation by touch or visual observation of moving objects.

3H.3 Environmental Impacts and Mitigation Measures

Methodology

Construction and operational point source noise impacts were evaluated by comparing anticipated noise levels to the guidelines set forth in the Municipal Code. Roadway noise impacts were projected using the FHWA-RD-77-108 prediction model. This methodology allows the user to define roadway configurations, barrier information (if any), and receiver locations. Roadway-noise attributable to project development was calculated and compared to baseline noise levels that would occur under the “no project” condition to determine significance.

Groundborne vibration impacts were evaluated by identifying potential vibration sources, measuring the distance between vibration sources and surrounding structure locations, and making a significance determination.

Criteria for Determining Significance

The criteria used to determine the significance of an impact are based on the Initial Study Checklist in Appendix G of the *CEQA Guidelines* and City precedent. Two criteria

were eliminated from further consideration, because the proposed project is not located within an airport noise impact zone. These issues, therefore will not be discussed here. Please refer to the Initial Study (Appendix A) for further clarification.

Based on the City of Long Beach Noise Ordinance and the Land Use Compatibility Matrix (Figure 3H.3), the proposed project would result in significant noise impacts if it would generate noise levels in excess of the following thresholds.

- **Construction Noise.** The proposed project would result in a significant construction impact if construction activity would occur between the hours of 7 PM and 7 AM during weekdays, before 9 AM or after 6 PM on Saturday, and any time on Sunday or federal holidays.
- **Traffic Noise.** The proposed project would result in a significant traffic impact if mobile noise would increase ambient noise levels measured at the property line of sensitive receptors by 3 dBA in CNEL to or within the “normally unacceptable” or “clearly unacceptable” land use compatibility category (refer to Figure 3H.3 for descriptions of these categories). In addition, the project would result in a significant impact if future residents on the project site would be exposed to interior noise levels greater than 45 dBA.
- **Stationary Noise.** The proposed project would result in a significant stationary operational noise impact if stationary noise sources on the associated with the proposed project would cause the ambient noise level at the property line of any property to exceed 5 dBA.
- **Vibration Noise.** The proposed project would result in a significant construction vibration impact if buildings would be exposed to the FRA building damage groundborne vibration threshold level of 0.5 PPV and/or the project would result in a significant vibration impact if sensitive individuals would be exposed to the FTA human annoyance response groundborne vibration threshold level of 80 RMS. The proposed project would result in an operational vibration impact if any device associated with the proposed project would create vibration above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at 150 feet from the source if on a public space or public right-of-way.

Project Impacts

Impact 3H.1: Could construction activities result in a temporary increase of ambient noise levels in the project area?

Noise impacts from construction activities occurring within the project site would be a function of the noise generated by construction equipment, the equipment location, and the timing and duration of the noise-generating activities. Construction activities would include five stages: (1) demolition; (2) site preparation; (3) foundation; (4) structural; and

(5) finishing and cleanup. Each stage involves the use of different kinds of construction equipment and, therefore, has its own distinct noise characteristics. The anticipated noise level associated with each construction phase appears in **Table 3H.5**. In addition, typical noise levels generated by individual pieces of equipment are displayed in **Table 3H.6**.

TABLE 3H.5
ESTIMATED NOISE LEVELS FROM CONSTRUCTION ACTIVITIES

| Construction Phase | Noise Level (dBA, L_{eq} ^a) |
|--------------------|---|
| Ground Clearing | 84 |
| Excavation | 89 |
| Foundations | 78 |
| Construction | 85 |
| Finishing | 89 |

^a Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.

SOURCE: Bolt, Baranek, and Newman, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, 1971.

TABLE 3H.6
NOISE LEVELS FROM CONSTRUCTION EQUIPMENT

| Construction Equipment | Noise Level (dBA, L_{eq} at 50 feet) |
|-------------------------|--|
| Dump Truck | 88 |
| Portable Air Compressor | 81 |
| Concrete Mixer (Truck) | 85 |
| Jack Hammer | 88 |
| Dozer | 87 |
| Paver | 89 |
| Generator | 76 |
| Pneumatic Tools | 85 |
| Concrete Pump | 82 |
| Backhoe | 85 |

SOURCE: Cunniff, *Environmental Noise Pollution*, 1977; U.S. Department of Transportation Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, 1995.

The construction noise levels presented in Table 3H.5 represent conservative conditions in which the maximum amount of construction equipment would be operating during a one-hour period. These estimated noise levels would not be continuous, nor would they be typical of noise levels throughout the construction period. As indicated in Table 3H.5, due to the type of construction equipment, the highest level of construction noise would be expected to occur during the site clearing and finishing and cleanup phases. Composite equipment use during these phases would generate a noise level of 89 dBA (without mufflers) at a reference distance of 50 feet from construction activity.

The nearest sensitive receptors are the single-family residences located along Marina Drive north of Second Street, approximately 600 feet from the proposed project site. These residences could experience an exterior noise level of approximately 68 dBA.¹¹ Existing noise on PCH is 71 dBA and Marina Drive is 66 dBA. Typical building construction provides a noise reduction of approximately 12 dBA with windows open and 26 dBA with windows closed.¹² This would result in interior window open noise levels of 56 dBA and interior windows closed noise levels of 42 dBA. **Table 3H.7** provides further information regarding exterior construction noise levels at different distances.

TABLE 3H.7
ATTENUATION OF CONSTRUCTION NOISE LEVELS AWAY FROM PROJECT SITE

| Distance (feet) | Noise Levels (dBA, L _{eq}) |
|-----------------|--------------------------------------|
| 50 | 76-89 |
| 100 | 70-83 |
| 200 | 64-77 |
| 400 | 58-71 |
| 800 | 52-65 |

SOURCE: U.S. Department of Transportation Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, 1995.

To put these noise levels in perspective, the maximum sound level that permits relaxed conversation with 100 percent intelligibility is 45 dBA.¹³ This drops to 60 percent intelligibility at 70 dBA.¹⁴ In addition, 50 percent of people report that noise levels of 75 dBA disturb sleep.¹⁵

Construction activity associated with the project would comply with the standards established in the City of Long Beach Municipal Code. Construction activity would not occur between the hours of 7 PM and 7 AM during weekdays, before 9 AM or after 6 PM on Saturday, and any time on Sunday or federal holidays.

Conclusion: The construction noise impact would be less than significant.

Mitigation: None required.

Significance After Mitigation: Less than significant.

¹¹ EPA, Bolt, Beranek, and Newman, *Noise Control for Buildings and Manufacturing Plants*, 1987.

¹² American Society for Testing of Materials, *Standard Classification for Determination of Outdoor-Indoor Transmission Class*, 2003.

¹³ USEPA, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, March 1974.

¹⁴ *Ibid.*

¹⁵ *Ibid.*

Impact 3H.2: Could construction activities result in exposure of sensitive receptors to excessive levels of groundborne vibration?

As shown in **Table 3H.8**, use of heavy equipment (e.g., a large bulldozer) generates vibration levels of 0.089 PPV or 87 RMS at a distance of 25 feet. The nearest sensitive receptors are the multi-family residences located along Marina Drive north of Second Street, approximately 600 feet from the proposed project site. Groundborne vibration decreases rapidly with distance and is typically an annoyance issue within 60 feet. At 600 feet, construction groundborne vibration levels would not exceed the building damage or human annoyance thresholds.

TABLE 3H.8
VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT

| Equipment | PPV at 25 ft (inches/second) ^a | RMS at 25 ft (Vdb) ^b |
|------------------|--|------------------------------------|
| Large bulldozer | 0.089 | 87 |
| Caisson drilling | 0.089 | 87 |
| Loaded trucks | 0.076 | 86 |
| Small bulldozer | 0.003 | 58 |

^a Fragile buildings can be exposed to groundborne vibration levels of 0.5 PPV without experiencing structural damage.

^b The human annoyance response level is 80 RMS.

SOURCE: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, April 1995.

Conclusion: The construction groundborne vibration impact would be less than significant.

Mitigation: None required.

Significance After Mitigation: Less than significant.

Impact 3H.3: Could increased traffic associated with the project result in a permanent increase of ambient noise levels in the project area?

Traffic attributed to the proposed project would increase the total daily traffic traveling along the major thoroughfares within the project vicinity. To ascertain off-site noise impacts, weekday (AM and PM peak period) and weekend traffic was modeled under future year (2009) no project and with project conditions. The analysis also included mobile noise levels associated with the potential signalized driveway.

Results of the analysis are summarized below in **Table 3H.9** and noise calculations are presented in Appendix C. The roadway noise increase attributed to the proposed project would be less than the 3 dBA CNEL increment at all analyzed segments. The greatest project-related noise increase (0.8 dBA CNEL) would be at roadway segments: Marina

**TABLE 3H.9
PROJECT-RELATED ROADWAY NOISE LEVEL INCREASES**

| Roadway Segment | CNEL at 50 Feet from Right-Of-Way ^{a,b} | | |
|--|--|---------------------|-------------------|
| | Future No Project | Future With Project | Project Increment |
| PCH between Loynes Drive and Second Street | 71.1 | 71.4 | 0.3 |
| PCH between Second Street and Studebaker Road | 71.1 | 71.2 | 0.1 |
| PCH between Studebaker Road and Marina Drive | 71.4 | 72.1 | 0.7 |
| Second Street west of Livingstone Drive | 61.7 | 61.7 | 0.0 |
| Second Street between Livingstone Drive and Bay Shore Avenue | 69.5 | 69.8 | 0.2 |
| Second Street between Bay Shore Avenue and Naples Plaza | 70.0 | 70.2 | 0.2 |
| Second Street between Naples Plaza and Marina Drive | 71.9 | 72.0 | 0.2 |
| Marina Drive between Second Street and Studebaker Road | 65.5 | 66.3 | 0.8 |

^a The predicted CNEL were calculated as peak hour L_{eq} and converted into CNEL using Caltrans *Technical Noise Supplement* (October 1998). The conversion involved making a correction for peak hour traffic volumes as a percentage of ADT and a correction for the nighttime penalties. The peak hour traffic was assumed to be ten percent of the average daily traffic.

^b CNELs are presented for the peak hour with greatest project increment.

SOURCE: ESA, 2006.

Second Street between Studebaker Road, Second Street between Bay Shore Avenue and Naples Plaza, and PCH between Studebaker Road and Marina Drive. Such increase would not be perceptible and would be below the 3 dBA threshold. The project would result in a less than significant mobile noise impact.

Interior noise levels at future on-site residences would be dominated by roadway traffic. The highest traffic-related CNEL noise level along a roadway bordering the project site would be 72.0 dBA along PCH. Residential units associated with the project would be constructed with dual glazed windows which would have a Sound Transmission Rating of 31 (noise reduction tendency).¹⁶ As such, interior noise level under the windows closed condition at the on-site residences facing PCH would be 40.2 dBA. The project would not exceed the HUD recommended interior noise level of 45 CNEL and the on-site mobile noise impact would be less than significant.

As shown in Table 3H.9, the loudest monitored ambient noise level at a roadway surrounding the project site was 72.0 dBA L_{eq} along PCH. This noise level is considered to be “normally unacceptable” for multi-family residences. However, as presented above, the proposed residential units would not be exposed to interior noise levels greater than the 45 CNEL HUD recommended interior noise level.

Conclusion: The proposed project would be compatible with the existing ambient noise environment.

¹⁶ American Society for Testing of Materials, *Standard Classification for Determination of Outdoor-Indoor Transmission Class*, 2003.

Mitigation: None required.

Significance After Mitigation: Less than significant.

Impact 3H.4: Could stationary noise sources result in a permanent increase of ambient noise levels?

Potential stationary noise sources related to the long-term operations of the proposed project mechanical equipment and parking areas. Mechanical equipment (e.g., parking structure air vents and HVAC equipment) would be designed so as to be located within an enclosure or confined to the rooftop of the proposed structure. In addition, mechanical equipment would be screened from view as necessary to comply with the provisions of the municipal code for on-site stationary sources. Operation of mechanical equipment would not be anticipated to increase ambient noise levels by 5 dBA or exceed the standards set forth in the municipal code.

The proposed project would include approximately 1,700 on-site parking spaces, including residential-only spaces and shared retail and guest parking spaces. Parking lot noise is currently generated at this location and similar noise levels would continue to be generated under the proposed project. Subterranean parking would be enclosed on all sides and noise would be inaudible at sensitive receivers.

Conclusion: Parking structure activity associated with the proposed project would not be anticipated to increase ambient noise levels by 5 dBA or exceed the standards set forth in the municipal code.

Mitigation: None required.

Significance After Mitigation: Less than significant.

Impact 3H.5: Could operational activities result in exposure of sensitive receptors to excessive levels of groundborne vibration?

The project would not include significant stationary sources of groundborne vibration. Operational groundborne vibration in the project vicinity would be generated by vehicular travel on the local roadways. However, traffic-related vibration levels would not be perceptible by sensitive receptors.

Conclusion: Operational vibration would result in a less than significant impact.

Mitigation: None required.

Significance After Mitigation: Less than significant.

Cumulative Impacts

Impact 3H.6: Could construction and operation of the project result in cumulative noise and vibration impacts?

Construction Noise. Noise from construction of the proposed project, and related projects, would be localized, thereby potentially affecting areas immediately surrounding or between each particular project site. The nearest related project included in Table 2.2 is the Marina Shores East project located along PCH, south of Studebaker Road. Construction noise levels associated with the Marina Shores East project would be similar to noise levels associated with the proposed project. The project sites are located approximately 850 feet apart and separated by numerous intervening structures. Construction noise from one site would not result in a noticeable increase in noise at sensitive receptors near the other project site. Furthermore, each of the related projects would be subject to noise limiting regulations similar to those prescribed for the proposed project (Section 8.80.202). Cumulative impacts associated with construction noise would be less than significant.

Operational Noise. The area surrounding the project site has been developed with uses that have previously generated, and would continue to generate, noise from lawn maintenance activities, mechanical equipment (e.g., air conditioning systems), and vehicle movements, among other community noise sources. The operational noise impact related to project development would be less than significant. In addition, the Marina Shores East project is located approximately 850 feet away and would not generate substantial or unusual operational noise. As such, cumulative noise impacts related to long-term project operations would be less than significant.

Regarding roadway noise, the cumulative increase in future CNEL traffic noise levels at project buildout with future ambient growth relative to the existing baseline are presented in **Table 3H.10**. The existing noise levels shown in Table 3H.10 differ from the existing noise levels presented in Table 3H.2. This is because Table 3H.2 shows the highest noise level regardless of peak period while Table 3H.10 shows the existing noise level associated with the greatest incremental change due to project traffic. As presented, the maximum cumulative roadway noise increase would be 1.3 dBA CNEL at Marina between Second Street and Studebaker Road. As such, cumulative roadway noise levels would not exceed the three dBA threshold increment. The project would not result in a cumulatively considerable impact with respect to roadway noise.

**TABLE 3H.10
CUMULATIVE ROADWAY NOISE LEVEL INCREASES**

| Roadway Segment | CNEL at 50 Feet from Right-Of-Way ^{a,b} | | |
|--|--|---------------------|----------------------|
| | Existing | Future With Project | Cumulative Increment |
| PCH between Loynes Drive and Second Street | 70.6 | 71.4 | 0.8 |
| PCH between Second Street and Studebaker Road | 70.6 | 71.2 | 0.6 |
| PCH between Studebaker Road and Marina Drive | 71.1 | 72.1 | 1.0 |
| Second Street west of Livingstone Drive | 67.7 | 61.7 | -5.9 |
| Second Street between Livingstone Drive and Bay Shore Avenue | 69.6 | 69.8 | 0.2 |
| Second Street between Bay Shore Avenue and Naples Plaza | 69.7 | 70.2 | 0.5 |
| Second Street between Naples Plaza and Marina Drive | 71.6 | 72.0 | 0.4 |
| Marina Drive between Second Street and Studebaker Road | 65.0 | 66.3 | 1.3 |

^a The predicted CNEL were calculated as peak hour L_{eq} and converted into CNEL using Caltrans *Technical Noise Supplement* (October 1998). The conversion involved making a correction for peak hour traffic volumes as a percentage of ADT and a correction for the nighttime penalties. The peak hour traffic was assumed to be ten percent of the average daily traffic.

^b CNELS are presented for the peak hour with greatest cumulative increment.

SOURCE: ESA, 2006.

Vibration. Groundborne vibration impacts from equipment that would be used during project construction and operations are localized. There are no related projects within 850 feet of the proposed project. As such, there is also no potential for cumulative groundborne vibration impacts.

Conclusion: Cumulative impacts associated with construction and operational noise and groundborne vibration would be less than significant.

Mitigation: None required.

Significance After Mitigation: Less than significant.

3I. Population and Housing

This section describes the existing and projected demographics of the project area and analyzes the proposed project's potential impacts on population and housing. Employment through creating new businesses can result in population growth and need for housing in the City and region. Demographic data presented in this section is primarily based on the SCAG 2004 forecasts, the Housing Element of the General Plan, and 2000 census data.¹

3I.1 Environmental Setting

Population

The County of Los Angeles is comprised of 88 cities and has a population of 9,802,800 persons. Approximately 462,000 of these people live in the City of Long Beach.² Located in the South Bay region of Los Angeles County, Long Beach has seen extensive population growth in the past 50 years, increasing from 251,000 persons in 1950 to 462,000 people in 2000. **Table 3I.1** summarizes population changes in Long Beach over the past 50 years and provides estimates of future population trends.

**TABLE 3I.1
LONG BEACH POPULATION CHANGES OVER 50 YEARS AND
FUTURE POPULATION TRENDS**

| Year | Population | Change | Percent Change |
|-------|------------|--------|----------------|
| 1950 | 250,767 | --- | --- |
| 1960 | 344,168 | 93,401 | 37% |
| 1970 | 358,633 | 14,465 | 4% |
| 1980 | 361,334 | 2,701 | <1% |
| 1990 | 429,433 | 68,099 | 19% |
| 2000 | 461,522 | 32,119 | 7% |
| 2005 | 489,528 | 27,976 | 6% |
| 2010* | 503,450 | 41,898 | 9% |
| 2020* | 533,590 | 30,140 | 6% |
| 2030* | 561,694 | 28,104 | 5% |

* SCAG estimate.

SOURCE: US Census Bureau 1950-2000.

SCAG forecasts indicate that the population will continue to grow in Long Beach (and the surrounding areas) and that the growth will be sustained through the next two decades. As with the rest of the region, Long Beach has rapidly grown at times but has

¹ SCAG, Growth Forecasting, <http://www.scag.ca.gov/forecast/index.htm>, accessed November 3, 2005.

² *Ibid.*

not experienced the more recent significant growth associated with other outlying areas of the Los Angeles basin, such as the Inland Empire, where a boon of affordable housing has allowed for an increase in the population. Based on SCAG population projections, Long Beach is expected to grow at a rate of between six and nine percent over the next 15 years.

As of 2000, 49 percent of the population of Long Beach was between the ages of 3 and 34. The median age was 30.8 years. According to the 2000 census the population of Long Beach was 36 percent Hispanic, 33 percent White, 15 percent African American, 12 percent Asian and the remaining 5 percent of the population was made up of other races. Approximately 71 percent of the population in 2000 was born in the United States; of those who were foreign-born, approximately 63 percent were born in a Latin American country.

Employment

In 1999, according to the US Census, the Long Beach labor force was estimated at 209,485 people, or 64 percent of the population. During the 1990s the employment base of Long Beach changed significantly largely due to the restructuring of the defense industry. **Table 3I.2** summarizes these changes. During the early 1990s, nearly one third of the City's employment base was oriented around manufacturing, with McDonnell Douglas (now Boeing) being the single largest employer. Service industries comprised the second largest group at 23 percent of all jobs while wholesale and retail trade comprised the third largest group at 22 percent.

**TABLE 3I.2
EMPLOYMENT TRENDS IN LONG BEACH**

| Major Industry | 1991 | | 1998 | | Change |
|---------------------------------|--------|---------|--------|---------|--------|
| | Jobs | Percent | Jobs | Percent | |
| Manufacturing | 59,964 | 31 | 41,626 | 23 | -31% |
| Business, professional & repair | 45,196 | 23 | 51,663 | 28 | 14% |
| Wholesale and retail | 42,699 | 22 | 40,175 | 22 | -6% |
| Government related | 14,486 | 8 | 19,065 | 10 | 32% |
| Transportation/public services | 13,107 | 7 | 13,329 | 7 | 2% |
| Finance, Insurance, Real Estate | 7,814 | 4 | 8,943 | 5 | 14% |
| All Others | 10,469 | 5 | 8,544 | 5 | -18% |

SOURCE: U.S. Census Bureau, 2000 Census.

During the 1990s, the southern California region was impacted by economic recession, resulting in economic restructuring that impacted Long Beach. Base closures and defense cutbacks contributed to a 31 percent decline in manufacturing jobs. Government-related employment increased by 32 percent. In addition, finance,

insurance and real estate employment jobs increased by 14 percent due to the resurgence of the downtown economy.

Currently, the project site provides employment for tourism-related industries such as hotel operation, car rental, and other ancillary services including the Elks Club and a night club.

Housing

The project site is located within PD-1 (SEADIP) and does not currently include housing. Residential uses are located northwest of the project site. Within PD-1 (SEADIP), housing is clustered into nine various residential tracts and is predominantly characterized by detached single-family houses or attached townhomes. These tracts create a sense of place and a feeling of neighborhood among the residents. None of the tracts are built upon a standard grid system. Each theme tract is laid out on curved, narrow streets, creating variety on the flat lowland. Lot sizes are smaller in the newer tracts, providing for relatively compact attached housing designs.

According to the Department of Finance, Long Beach had 170,089 housing units in 2000. A slight majority of the housing units (53 percent) were multi-family units, while 45 percent of the units are single-family, and the remaining two percent was made up of mobile homes/trailers and other units (for example, vans, campers, houseboats, etc.).

Table 3I.3 summarizes the housing types in Long Beach.

**TABLE 3I.3
HOUSING IN LONG BEACH BY TYPE**

| Unit Type | Total Units | | Number of Bedrooms | | |
|--------------------------|----------------|---------|--------------------|-------|-------|
| | Number | Percent | 0-1 bed | 2-bed | 3-bed |
| Single-family detached | 69,287 | 40% | 10% | 35% | 55% |
| Single-family attached | 8,261 | 5% | 30% | 45% | 25% |
| Multi-family (2-4 units) | 24,763 | 15% | 51% | 39% | 10% |
| Multi-family (5+ units) | 65,359 | 38% | 64% | 33% | 3% |
| Mobile-homes, Trailers | 2,266 | 1% | 36% | 57% | 7% |
| All other units | 2,153 | 1% | 74% | 15% | 11% |
| Total | 172,089 | | | | |

SOURCE: Department of Finance (DOF); 2000, U.S. Census; 1990 PUMS.

Households are occupied housing units. According to the Housing Element of the General Plan, Long Beach had 160,546 households in 2000. The majority of households (59 percent) were families. Single people comprised the second largest group at 31 percent of households. Other households (for example, unrelated persons living together) comprised the remaining 10 percent. **Table 3I.4** shows historic household trends in Long Beach.

TABLE 3I.4
HOUSEHOLD TRENDS IN LONG BEACH

| | 1980 | 1990 | 2000 | 2010 (projected) | 2020 (projected) |
|--|---------|---------|---------|---------------------|---------------------|
| Total Households | 151,611 | 158,975 | 163,088 | 171,723 | 184,906 |
| SOURCE: US Census 1980, 1990, SCAG forecasts 2000, 2010, 2020. | | | | | |

Housing tenure refers to whether a housing unit is owned, rented or vacant. In 2000, 41 percent of Long Beach households were owned while the remaining 59 percent were renter occupied. Vacancy rates for Long Beach have remained fairly consistent at around five percent from 1990 to 2000.

3I.2 Regulatory Background

Regional

SCAG's Regional Comprehensive Plan (RCP) serves as a comprehensive planning guide, focusing growth through the year 2030. The primary goals of the RCP are to improve the standard of living, enhance the quality of life, and promote social and economic equity. Within the RCPG, issues related to employment and growth are primarily addressed in Chapter 2, The Economy, and Chapter 3, Growth Management. These chapters analyze growth patterns, provide economic forecasts, recommend strategies for economic prosperity and equity, and specify growth management policies. SCAG's Regional Transportation Plan (RTP) provides forecasts of population, households, and employment levels for counties, subregions, cities, and census tract within SCAG's jurisdiction.

Local

The Housing Element of the General Plan, adopted in 2001, includes a number of policies that are concerned with identifying local housing problems and needs as well as measures necessary to mitigate and alleviate problems for all economic segments of the community. The goals described in the General Plan that pertain to the proposed development include:

- Goal #2: Provide increased opportunities for the construction of high quality new housing.
- Goal #3: Provide increased opportunities for home ownership.

The Housing Plan supports land use policies that focus new residential development along transit corridors and in employment and activity centers.

In accordance with the General Plan, all new development should be evaluated with respect to the potential impacts to the local population and housing that might result from the proposed change.

3I.3 Environmental Impacts and Mitigation Measures

Methodology

The project proposes to change the land use of the site from tourism-oriented uses to mixed-use residential and retail uses. The potential exists for impacts related to population, employment, and housing in terms of introducing land uses that could increase the employment opportunities and incrementally increase the demand for housing in the area or similarly introduce housing that could incrementally increase the demand for employment in the area or alternatively cause employees/residents to drive long distances to find jobs. This section assesses these impacts as a result of the implementation of the proposed project based on data from the SCAG 2004 forecasts, the Housing Element of the General Plan, and 2000 census data.

Significance Criteria

The criteria used to determine the significance of an impact are based on the Initial Study Checklist in Appendix G of the *CEQA Guidelines* and City precedent. Two criteria were eliminated from further consideration because the proposed project would not displace existing housing or people, necessitating the need for replacement housing elsewhere. These issues therefore will not be discussed here. Please refer to the Initial Study (Appendix A) for further clarification.

For this analysis, the proposed project may result in significant impacts if it would:

- Induce substantial population growth in an area; whether directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

Project Impacts

Impact 3I.1: Could the proposed project substantially induce population growth in the project area?

Housing impacts and subsequent population growth would result from construction of new housing units. New non-residential development, such as retail, office, manufacturing, and industrial land uses would increase employment in an area and demand for housing.

The project site is currently developed with a 250-room hotel. The proposed project would replace the existing land use with 170,000 square feet of retail space and 425 residential units.

The proposed project could, as a result, introduce approximately 744 new residents.³ As shown in Table 3I.1, by the year 2030, the population of the City is expected to grow to 561,694, from 89,528 in 2005. This is an increase of 72,166 people. Based on this number, direct population growth resulting from the development of the proposed residential uses would account for about 3.5 percent of the population growth expected in the City between 2005 and 2030 within the City. The estimated population generated by the proposed residential uses would represent a very small percentage of the population growth anticipated within Los Angeles County, forecasted by SCAG to be 12,338,500 by the year 2025.⁴

The proposed project could also increase the number of employees at the project site from approximately 275 employees with the existing hotel, to 350 employees.⁵ According to the 2000 US Census, the unemployment rate in Long Beach was 5.8 percent. As previously mentioned, the dominant industry in Long Beach has shifted. The top three growth industries categories are government (+32 percent); business, professional and repair (+14 percent); and finance, insurance and real estate (+14 percent). The proposed project would be well within SCAG employment growth projections for Los Angeles County, forecasted by SCAG to be 4,860,000 by the year 2025.⁶

Project employees would likely be working in the service sector related to retail uses, which generally experienced a decline in employment between 1991-1998. In addition, the proposed project would provide for short term employment opportunities during construction.

The proposed project would not result in the direct inducement of significant population growth, but, rather would respond to regional demand for additional goods, services and housing. The proposed project would accommodate existing and projected future increased demands for retail facilities and housing in the project area. The proposed project would generally accommodate rather than induce growth. No significant impacts would occur.

Conclusion: The proposed project would have a less than significant impact on a population growth in the project area.

Mitigation: None required.

Significance After Mitigation: Less than significant.

³ Based on factors of 1.75 persons per unit. Data provided by Robert Lesser & Co, January 2004.

⁴ SCAG, *RTP Program EIR Draft*, February 1, 2001.

⁵ Based on factors of 1.1 employees per hotel room and 500 square feet per employee. Factors provided by Charles Lesser & Co, June 2003.

⁶ Based on personal conversation with Hsi-Hwa Hu at SCAG, June 5, 2006.

Cumulative Impacts

Impact 3I.2: Together with other area projects, could the proposed project have cumulative impacts on population and housing?

The impact analysis provided above includes an assessment of the population, subsequent employment, and housing resulting from a direct increase in residential and retail land uses associated with the proposed project. This analysis includes induced direct population growth, subsequent projected employment, and housing demand resulting from project implementation. As discussed above, the net population increase associated with the proposed project would be well within the growth forecasts for Long Beach and Los Angeles County and would not contribute to significant impacts on population and housing.

The net direct increase in housing associated with the proposed project would also be well within the household growth forecast for Long Beach and Los Angeles County. The increase in housing demand associated with the proposed project employment forecasts could be accommodated by projected housing supplies in Long Beach. The proposed project would help to relieve a regional housing shortage that exists in southern California, according to SCAG. Because of the existing housing shortage in the project area and the County, the proposed project would have a less than significant impact on housing. The proposed project would not have cumulative impacts on population and housing.

Conclusion: The proposed project, with other area projects, would not have significant cumulative impacts on population and housing.

Mitigation: None required.

Significance After Mitigation: Less than significant.

3J. Public Services and Utilities

The purpose of this section is to assess the impacts of the proposed project on fire services, police protection, schools, wastewater collection and treatment, water service, and solid waste disposal. This section is based on comparisons of projected service needs to the existing or anticipated levels of service.

For each of the public services and utilities included in this section, existing infrastructure and levels of service are described and improvements that would be required to accommodate the project-induced demand are identified. This section identifies current levels of service or capacity, as appropriate, and assesses the quantities of services necessary for construction and operation of the project. Services for the proposed project are assessed in terms of location, existing and projected service ratios, response times, planned capacity improvements, and other service objectives.

Cumulative impacts are determined with consideration of projected development in the study area. Where impacts to public services and utilities are determined to be significant, mitigation measures are recommended to ensure adequate delivery of public services and utilities to the project site.

3J.1 Environmental Setting

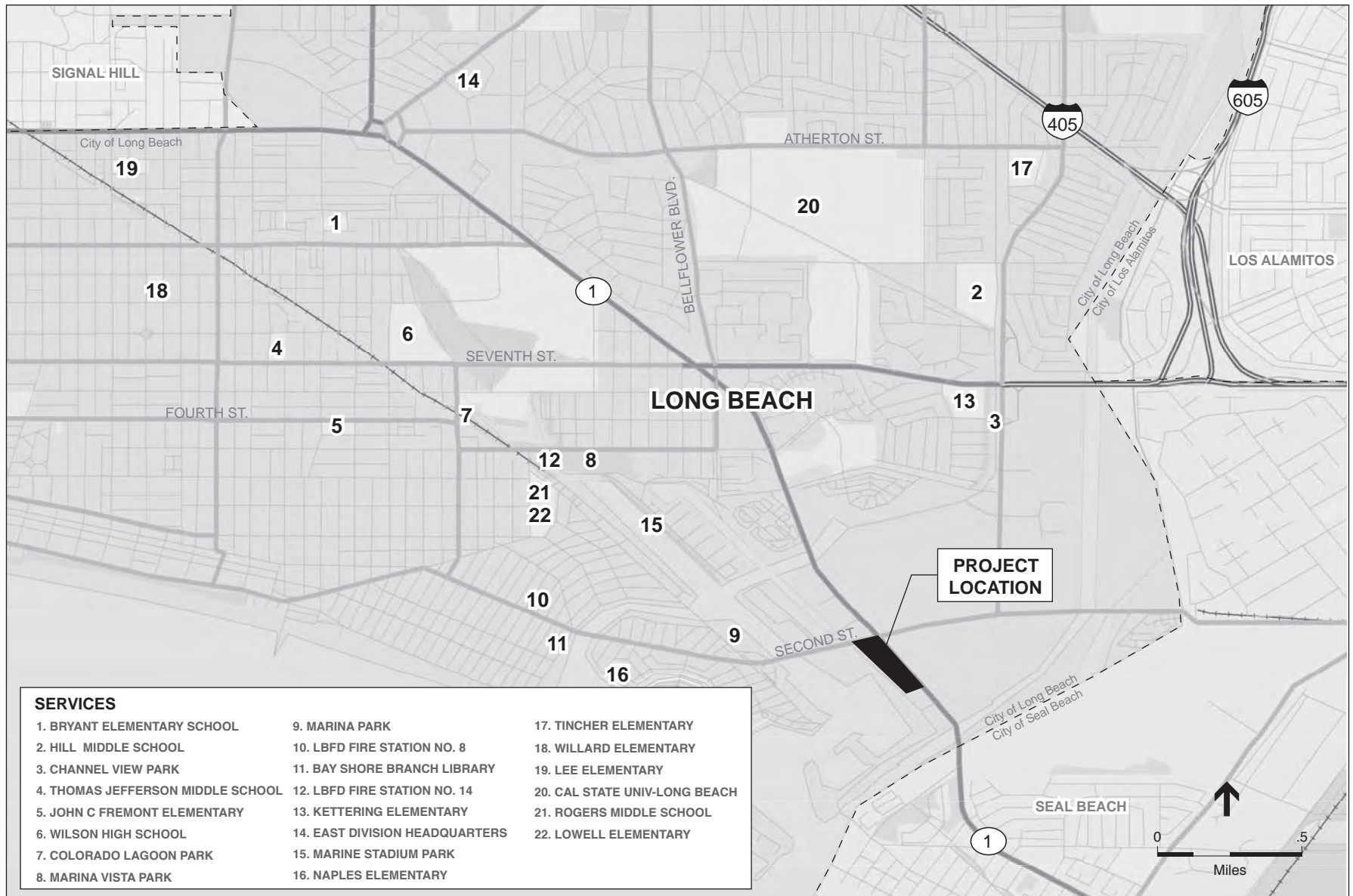
Fire Service

The Long Beach Fire Department (LBFD) provides fire and emergency medical response, fire prevention, and hazardous materials regulatory enforcement to the City. As part of its service to the community, project plans are reviewed by the LBFD to ensure compliance with all applicable fire code and ordinance requirements for construction, access, water mains, fire flows and fire hydrant placement.

LBFD consists of four bureaus: Administration, Operations, Fire Prevention, and Support Services and maintains a staff of approximately 450 fire personnel. The Operation Bureau includes the Emergency Medical Services Division that is responsible for the primary and continuing education of all firefighters as it relates to the delivery of medical services.

LBFD maintains 23 fire stations, a fire training center, 22 engines, four trucks, nine paramedic rescue units, one foam apparatus, three airport fire fighting and rescue vehicles, two harbor fireboats, and one technical rescue vehicle.

Station 8, located at 5365 Second Street is the first response station for the project site. It is located approximately 1.2 miles to the west of the project site. The second response fire station is Station 14 located at 5200 Eliot Street, roughly 1.9 miles to the northwest of the project site. **Figure 3J.1** shows the nearest fire station.



SOURCE: Street Map, 2006; ESA, 2006.

Long Beach Marina EIR . 204452

Figure 3J.1
Location of Services

The average citywide emergency response time from dispatch to arrival is less than five minutes. LBFD usually responds to calls in less than the average citywide response times. LBFD goals for emergency response are to respond to 90 percent of emergency calls within five minutes and to respond to paramedics' calls within eight minutes. In addition, all units on the first alarm are to arrive within eight minutes of dispatch for reported structure fires. All engines and truck companies are staffed by four firefighters and all rescue units are staffed by two firefighter/ paramedics at all times. Six personnel are dispatched for life-threatening medical responses, and a minimum of 19 personnel are dispatched for initial response to structure fires. Currently, no plans for expansion of department facilities exist. LBFD is also a part of the California Office of Emergency Services Master Mutual Aid system.

The City adopted the California Fire Code (CFC), with some amendments and modifications, as part of the part of the City's Municipal Code. Fire flow requirements are based on building types and floor area and range from 1,250 to 8,000 gallons per minute (gpm) at 20 pounds per square inch (psi). The modifications include amendments to fire extinguisher and storage requirements. Generally, the intent of the CFC is to prescribe regulations consistent with nationally recognized good practices for the safeguarding of life and property from the hazards of fire and explosion.

In accordance with the CFC, LBFD requires the installation of sprinkler systems in many new buildings, including retail buildings in excess of 5,000 square feet and buildings greater than 55 feet in height. In addition, on-site hydrants are required in any portion of a project site that exceeds the allowable distance from a public hydrant located in the right-of-way. Fire flow requirements are subject to LBFD standards based on the type of building and use on a case by case basis.

Police Service

The Long Beach Police Department (LBPd) provides law enforcement services throughout the City. There currently are 968 sworn officers within the LBPd service area, with an officer to population ratio of approximately 2.0 officers per 1,000 residents. It is the goal of the LBPd to strengthen that ratio to 2.5 officers per 1,000 residents. The average citywide response time to priority one calls (life or property in imminent danger) for service is 5.2 minutes. The LBPd goal for police response times for priority one calls is under five minutes.

The LBPd operates a helicopter surveillance program; a canine unit; a full-service, 24-hour jail facility; a communications/dispatching center; an investigation bureau; and a firing range. Community-oriented police activities include community relations, traffic and parking enforcement, a Neighborhood Watch Program, crime prevention, bicycle patrol, and a Drug Abuse Resistance Education (DARE) program.

The LBPd also uses the Community Oriented Public Safety (COPS) approach to deter crime. This approach results in the assigned beat patrol officer directly working with both

the residents and business operators in identifying criminal behavior and working together to effectively deal with problems, both before and after they develop. As part of the LBPD's service to the community, project site plans are reviewed by the LBPD to determine the need for any additional crime prevention and safety measures.

The Patrol Bureau of the LBPD is divided into four divisions (North, South, East, and West). The LBPD eastern substation, located approximately 4.0 miles northwest of the project site at 4800 Los Coyotes Diagonal, would serve the proposed project (see Figure 3J.1). This full-service police station serving the East Patrol Division opened in January 1994 and supports the LBPD's decentralization and community policing efforts. The East Patrol Division is the largest division in the City. The maximum capacity of the substation is 145 employees, although it currently operates at approximately 85 percent capacity (123 employees).

The LBPD is part of the Los Angeles County Law Enforcement Mutual Aid Organization that is overseen by the Los Angeles County Sheriff's Department. In the event that mutual aid is required, the Emergency Operations Bureau of the Los Angeles County Sheriff's Department is notified, and in turn, notification of other cities in predetermined response groups occurs. The California State University Police, Long Beach Community College Police, Veteran's Hospital Police, and the United States Coast Guard are also available for mutual aid, if needed.

Schools

The Long Beach Unified School District (LBUSD) provides elementary, middle, and high school education to the residents of the City. In 2003, LBUSD had a total enrollment of approximately 97,560 students for the cities of Long Beach, Lakewood, Signal Hill, and Avalon (Catalina Island). These students are enrolled in kindergarten through 12th grade programs.¹ The LBUSD employs a total of 10,797 personnel, including 5,345 regular full-time teachers. The LBUSD has 62 elementary schools, 24 middle schools, and 9 high schools.

The project site is located within the attendance boundaries of Kettering Elementary School (Grades K through 5), Hill Classical Middle School (Grades 6 through 8), and Wilson High School (Grades 9 through 12) (see Figure 3J.1). The current enrollment for each school, respectively, is 407 students; 1,151 students; and 4,574 students.

Existing Capacity

Using the state of California's definition of available classrooms (for example, excluding certain portable classrooms) and factoring in special day class students class sizes, the LBUSD has a projected capacity of 74,192 students in 2,984 available classrooms as

¹ Economic & Planning Systems Inc., *School Mitigation Fee Justification Study for Long Beach Unified School District*, May 2004.

indicated in **Table 3J.1**. When compared with the current enrollment of approximately 97,560 students, the LBUSD has a capacity shortfall of 23,368 seats.

**TABLE 3J.1
LBUSD CAPACITY ^a**

| Description | K-6 | 7-8 | 9-12 | Non-Severe Special Needs | Severe Special Needs | Total |
|--------------------------|--------------|------------|------------|--------------------------------|----------------------------|--------------|
| Portable: leased >5 yrs. | 54 | 9 | 35 | | | 98 |
| Portable: Owned | 322 | 63 | 55 | | | 440 |
| Permanent Classrooms | <u>1,284</u> | <u>371</u> | <u>599</u> | <u>100</u> | <u>92</u> | <u>2,446</u> |
| Total Classrooms | 1,660 | 443 | 689 | 100 | 92 | 2,984 |
| Classroom Capacity | 41,500 | 11,961 | 18,603 | 1,300 | 828 | 74,192 |

^a The table above excludes 130 state relocatable classrooms and 594 portable classrooms leased for less than five years.

SOURCE: State of California, *Existing School Building Capacity for Long Beach Unified*, SAB 50-02, revised 2000.

To alleviate the shortfall, the LBUSD uses 130 leased state relocatable classrooms and 594 portable classrooms (leased less than five years) (not calculated in the classroom capacity provided in Table 3J.1). While LBUSD has installed numerous portable classrooms and has modified its available programs and schedule to provide for the overall shortfall of classrooms, the necessity for these modifications will diminish in the future, as number of students per class decreases.

Future Expected Capacity

Approximately 14,705 seats are being added to LBUSD with both state and local funds. The State School Facilities Program is a primary source of funding. This program, Senate Bill 50, funded by Proposition 1A and Proposition 47, and amended by Assembly Bill 16, is based on 50 percent funding from the state and 50 percent funding from local districts. The LBUSD has received \$104.7 million in state funding for new construction and modernization. The LBUSD has also been approved for an additional \$30.8 million. Applications for another \$44 million have been submitted or will be submitted to the state. The state funding is being matched by local General Obligation bonds, developer fees, and other local sources.

Even with the increase in capacity funding from state and local funds, the LBUSD would continue to have a shortage of space to serve new development using the state's definition of district school facility capacity. The LBUSD would continue to utilize portable classrooms to meet this short fall.

School capacity can sometimes be affected by students that attend a local school but reside outside the district boundary. State law permits a school district to consider applications to enroll children who reside outside the district if the parent or guardian is

employed within the boundaries of the district.² “Sending” and “receiving” school districts may refuse interdistrict transfers. Grounds for such refusals include findings that the requested transfer would adversely impact a district’s desegregation plan, or that the additional cost of educating a pupil would exceed the amount of additional state aid received as a result of the transfer. The LBUSD policy indicates that students may be accepted through interdistrict transfers when space is available. Districts, however, cannot arbitrarily refuse transfers. The LBUSD currently permits interdistrict transfers based on the criteria defined by the state.

Schools planned for construction near the project site include an elementary school with a potential enrollment of 1,450 students that would be located south of Hill Street between Redondo Avenue and Obispo Avenue, and a middle school with a potential enrollment of 850 students that would be located west of Cherry Avenue and south of 20th Street. Currently, these projects are on hold.³

Wastewater Conveyance and Treatment

The Los Angeles County Sanitation Districts (LACSD), a confederation of independent special districts, provides wastewater and solid waste services to the City. The LACSD service area covers approximately 800 square miles and encompasses 78 cities and unincorporated territory within Los Angeles County and serves approximately 5.4 million people.

The LACSD operates ten water reclamation plants (WRPs) and one ocean discharge facility (Joint Water Pollution Control Plant) that treat approximately 520 million gallons per day (mgd), 190 mgd of which are available for reuse. The San Jose Creek WRP is the largest of the WRPs.

Currently, a majority of the City’s wastewater is delivered to the Joint Water Pollution Control Plant that has a design capacity of 385 mgd and currently processes an average flow of 322.7 mgd. The remaining portion of the City’s wastewater is delivered to the Long Beach Water Reclamation Plant, which provides treatment for approximately 25 mgd of wastewater. The total daily flow of wastewater in the City is 347.7 mgd with a capacity of 410 mgd.

The existing hotel generates approximately 30,000 gallons of wastewater per day. According to the land title survey, there is an on-site local drainage system with drain inlets on the project site.⁴ Based on the results of the hydrologic analysis of the site, the existing peak flow rate at the outlet of the existing storm drain system is 21 cubic feet per second (cfs). The estimated peak flow rate at the outlet after implementation of the

² California Education Code Section 48204.

³ Matamoto, Carrie, Director of Facilities Planning and Management, LBUSD, personal communication on November 8, 2005.

⁴ Lennar Corporation, *Land Title Survey*, August 24, 2004.

proposed project is 17 cfs.⁵ Therefore, the proposed conditions would not be detrimental to the existing storm drainage system.

Water Service

The Long Beach Water Department (LBWD) provides water services for domestic, irrigation, and fire protection purposes to developments within the City. There are two types of water supply sources: natural and reclaimed resources. Reclaimed water is wastewater that has been treated to a sufficient degree for certain types of uses, is nonpotable, and must be conveyed in a separate system from potable water to avoid the possibility of direct human consumption. Reclaimed water can be used for irrigation purposes.

The LBWD also reviews project plans to ensure compliance with all applicable fire code and ordinance requirements for construction, access, water mains, fire flows, and fire hydrant placement. The LBWD provides 100 percent of the City's water needs, mixing locally developed water from LBWD operated wells with water from the Metropolitan Water District of Southern California (MWD). During the summer months, the LBWD satisfies almost 42 percent of its demand by pumping its own wells and about 50 percent by importing water from the MWD. The remaining eight percent of the water supply is for non-drinking purposes that is tertiary treated reclaimed water from the Long Beach Reclamation Plant owned and operated by LACSD. LBWD maintains 12-inch water lines in Second Street, PCH, and Marina Drive that would serve the site. The existing land use currently consumes approximately 36,000 gallons of water per day.

Solid Waste

The LACSD is also responsible for solid waste services in the City and throughout Los Angeles County. There are numerous public and private landfills as well as transfer stations in Los Angeles County that could potentially receive waste collected from the proposed project. For this reason, the provision of solid waste disposal services should be considered in the context of the regional and local landfills.

Solid waste in Los Angeles County is collected by over 250 waste haulers and several city governments. The waste is then disposed at landfills in the County, transformation facilities (for example, refuse-to-energy), and inter-modal facilities that transport the waste by rail to facilities outside the County.

Within the City, solid waste collection services are provided by the City's Environmental Services Bureau and 21 private permitted waste haulers. In 2002, residents and businesses in the City disposed of 675,741 tons per year, or approximately 1,851 tons per day (tpd), of solid waste. This disposal amount reflects a diversion rate of roughly 44 percent. A diversion rate is the percent of refuse that would have gone to a landfill,

⁵ TRC, *Remedial Action Plan: Former 76 Station 5379, 6260 East Second Street, Long Beach, California*, Prepared for ConocoPhillips Company, May 21, 2003.

but instead is re-used and/or recycled. Assembly Bill 939 (AB 939) mandates that jurisdictions in the state of California divert at least 50 percent of their waste stream.

The Puente Hills Landfill is the closest Class III landfill operated by the LACSD that could be used by the proposed project. The conditional use permit for the Puente Hills Landfill authorizes the disposal of a maximum of 13,200 tpd. Typically, the landfill closes early due to this permit-imposed tonnage restriction. Disposal operations would continue under the current conditional use permit until October 31, 2013, at which time the disposal site would stop accepting waste for disposal. As indicated in **Table 3J.2**, 241,923 tons, or 36 percent of the solid waste disposed of by the City residents and businesses were disposed of at the Puente Hills Landfill in 2002. The rest of the waste is disposed at the other area disposal facilities.

**TABLE 3J.2
SOLID WASTE DISPOSAL BY FACILITY, 2002**

| Facility Name (County) | Disposal Amount (tons) | Percent of Total |
|---|-----------------------------------|-------------------------|
| Arvin Sanitary Landfill (Kern) | 152 | 0.02% |
| CIWMB Nonhazardous Codisposal (Kings Waste and Recycling Authority) | 441 | 0.07% |
| Antelope Valley Public Landfill (Los Angeles) | 259 | 0.04% |
| Azusa Land Reclamation Co, Inc. (Los Angeles) | 3,196 | 0.47% |
| Waste Management of Lancaster SLF (Los Angeles) | 54 | 0.01% |
| Chiquita Canyon Sanitary Landfill (Los Angeles) | 17,517 | 2.59% |
| Puente Hills Landfill #6 (Los Angeles) | 241,923 | 35.80% |
| Commerce Refuse to Energy Facility (Los Angeles) | 696 | 0.10% |
| Sunshine Canyon SLF County Extension (Los Angeles) | 5,923 | 0.88% |
| Southeast Resource Recovery Facility (Los Angeles) | 271,332 | 40.15% |
| Bradley Landfill West and West Extension | 7,150 | 1.06% |
| Prima Deshecha Sanitary Landfill (Orange) | 23,187 | 3.43% |
| Olinda Alpha Sanitary Landfill (Orange) | 70,494 | 10.43% |
| Frank R. Bowerman Sanitary Landfill (Orange) | 7,723 | 1.14% |
| El Sobrante Sanitary Landfill (Riverside) | 19,520 | 2.89% |
| Colton Refuse Disposal Site (San Bernardino) | 10 | 0.00% |
| Fontana Refuse Disposal Site (San Bernardino) | 7 | 0.00% |
| San Timoteo Solid Waste Disposal Site (San Bernardino) | 19 | 0.00% |
| Simi Valley Landfill-Recycling Center (Ventura) | 6,139 | 0.91% |
| Total | 675,741 | 100.00% |

The Puente Hills Materials Recovery Facilities (MRF), located close to the landfill, is also owned and operated by LACSD. The purpose of the MRF is to recover recyclable

materials from commercial waste and to provide for the efficient transfer to the residual waste to permitted landfills for proper disposal.

Other solid waste management facilities operated by LACSD that are available to accept solid waste from the proposed project site include the South Gate Transfer Station, the Commerce Refuse to Energy Facility, and the Downey Area Recycling and Transfer Facility. The South Gate Transfer Station is permitted to accept up to 1,000 tpd of refuse and currently receives approximately 545 tpd of refuse. The Commerce facility is a transformation facility (for example, refuse-to-energy) that is permitted to accept up to 1,000 tpd, not to exceed 2,800 tons per week, and currently receives approximately 360 tpd of solid waste. The Downey facility is a materials recovery/transfer facility that is permitted to accept up to 5,000 tpd and currently receives approximately 1,000 tpd of refuse.

The LACSD also participates in ownership of the Southeast Resource Recovery Facility (SERRF) through a Joint Powers Agreement with the City. SERRF is a transformation facility operated by a contractor and is permitted to accept 2,240 tpd or 500,000 tons per year and currently receives approximately 1,500 tpd. In 2002, approximately 271,332 tons of solid waste (40 percent) disposed of by the City residents and businesses were disposed at SERRF.

The City has increased efforts to divert refuse through waste reduction, recycling, and composting programs. Source reduction programs in place include xeriscaping, grasscycling, backyard composting, mulching, and business waste and government source reduction programs. The City provides recycling services such as residential curbside recycling and commercial pickup service through private contractors. Each of the 21 permitted private waste haulers operating in the City is required to have a City-approved recycling program in order to meet applicable waste diversion requirements, as described below in the regulatory background section. In order to maintain compliance goals, contractors are required to reuse construction forms where practicable or applicable, attempt to balance soils on-site, minimize over-cutting of lumber and polyvinyl chloride piping where feasible, and reuse landscape containers to the extent feasible.

Currently, the hotel generates approximately 1,000 pounds of solid waste per day.⁶

⁶ Based on generation factor of four pounds of solid waste per day per room; CIWMB, *Estimated Solid Waste Generation Rates for Service Establishments*, 2004.

3J.2 Regulatory Background

State

Fire Service

The California Health and Safety Code is the document that stipulates which building standards shall be applied to all of the occupancies throughout the state. Under Section 18938(b), the standards that influence energy efficiency considerations are in the Uniform Building Code of the International Conference of Building Officials, the Uniform Fire Code of the International Conference of Building Officials, the Western Fire Chiefs Association, Inc, the Uniform Mechanical Code of the International Conference of Building Officials, and the International Association of Plumbing and Mechanical Officials. The LBFD is anticipating that a new International Fire Code with amendments may be adopted in 2008.

Police Service

All law enforcement agencies within California are organized and operate with the applicable provisions of the California Penal Code, which sets forth the authority, rules of conduct, and training for peace officers. Under state law, all sworn municipal and county police officers are state peace officers.

Schools

California Senate Bill (SB) 50 enacted in 1998, established a new comprehensive program for funding school facilities based on 50 percent funding from the state and 50 percent funding from local districts, while limiting the obligation of developers to mitigate the impact of projects on school facilities. The payment of school mitigation impact fees authorized by SB 50 is deemed to provide full and completed mitigation of project impacts on school facilities. SB 50 specifically provides that a state or local agency may not deny or refuse to approve the planning, use, or development of real property on the basis of a developer's refusal to provide mitigation in amounts in excess of that established by SB 50.

Water Service

Title 24 of the California Administrative Code includes the California Building Standards, including the California Plumbing Code (Part 5), which promotes water conservation. Title 20 addresses public utilities and energy and includes appliance and efficiency standards that promote water conservation. In addition, a number of state laws require water-efficient plumbing fixtures in structures.

Section 10610 of the California Water Code established the California Urban Water Management Planning Act (CUWMPA), which requires urban water suppliers to initiate planning strategies to ensure an appropriate level of reliability in its water service. The

CUWMPA states that every urban water supplier that provides water to 3,000 or more customers, or that annually provides more than 3,000 acre-feet of water service, should make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its various categories of customers during normal, dry, and multiple-dry years. The CUWMPA describes the contents of Urban Water Management Plans as well as methods for urban water suppliers to adopt and implement the plans.

SB 610 requires urban water suppliers to identify existing and planned sources of water for planned developments of a certain size. It further requires public water system to prepare a specified water supply assessment for projects that meet the following criteria:

- a) A proposed residential development of more than 500 dwelling units
- b) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

Since the proposed project is the development of 425 residential dwellings and 170,000 square feet of commercial land use, the proposed project is not covered by SB 610.

SB 221 prohibits approval of land use development of more than 500 dwelling units unless the applicable public water supply system provides written verification that sufficient water supply is available. Since the proposed project is the development of 425 residential dwellings, the proposed project is not subject to SB 221.

Solid Waste

In response to capacity and siting problems for landfills, the need for source reduction, recycling, and composting became apparent. In response to this solid waste disposal issue, three pieces of legislation regarding solid waste have been passed at the state level. The California Integrated Waste Management Act (AB 939) emphasized conservation of natural resources through reduction, recycling, and reuse of solid waste. AB 939 requires that all cities and counties divert 25 percent of solid waste stream from landfills by 1995 and 50 percent by 2000. It also requires that all cities conduct a Solid Waste Generation Study and prepare a SRRE. In accordance with AB 939, local agencies must submit an annual report to the California Integrated Waste Management Board (CIWMB) summarizing its progress in diverting solid waste disposal.

SB 1374 that passed in 2002 requires that the annual report submitted to CIWMB also include a summary of the progress made in diversion of construction and demolition waste materials. In addition, SB 1374 requires CIWMB to adopt a model ordinance suitable for adoption by a local agency to require 50 to 75 percent diversion of construction and demolition waste materials to landfills. Local agencies are required to adopt construction and demolition diversion ordinances with diversion rates in accordance with SB 1374. If

such an ordinance is not adopted by the local agency, then the model ordinance adopted by CIWMB will take effect.

The California Solid Waste Reuse and Recycling Access Act of 1991 (as amended) requires each development project to provide an adequate storage area for collection and removal of recyclable materials.

Local

Fire Services

The Public Safety Element of the General Plan⁷ recognizes the importance of ensuring that fire facilities and protective services are sufficient for the existing and future population and land uses of the City. This element focuses on reducing threats to public safety through the protection of property and wildlands from fire through the review of projects and development proposals and on following the City's fire prevention standards and mitigation measures. The Public Safety Element of the General Plan recognizes the importance of continuously reviewing and reevaluating plans to meet fire protection needs resulting from changing conditions.

The Public Safety Element of the General Plan also establishes the importance of continued efforts to reduce all fire hazards while placing special emphasis on reducing hazards associated with fire-prone industrial facilities, old and deteriorating structures, and multi-story buildings. The City also requires decision makers to make findings on the impacts that a project or land use plan change might have on fire protection services.

Police Services

The Public Safety Element of the General Plan recognizes the importance of preventing crimes through physical planning and emphasizes the importance of continued efforts for incorporating security factors into the existing and new buildings.⁸ These efforts need to focus on reducing threats to public safety through the review of projects and development proposals. The Public Safety element requires the Planning Department to maintain a liaison with law enforcement and the Fire, Building Safety, and Community Development Departments.

Wastewater Conveyance and Treatment

LACSD provides wastewater services to the project site and all necessary infrastructure improvements as part of the proposed project will be constructed in accordance with applicable LACSD and City requirements.

⁷ City of Long Beach, Department of Planning and Building, *Public Safety Element of the Long Beach General Plan*, May 1975.

⁸ *Ibid.*

Solid Waste

In response to AB 939, the City developed a SRRE which was approved by CIWMB in September 1994. The SRRE describes the means by which the City had and will continue to attain the diversion goals set forth in AB 939, primarily through source reduction, recycling and composting.

Municipal Code

The Municipal Code also applies to the project site.⁹ Title 8 regulates public health and safety issues; and Title 15 regulates utilities; Title 16 regulates public facilities; and Title 18 regulates issues related to water in the City.

3J.3 Environmental Impacts and Mitigation Measures

Methodology

The proposed project has been evaluated for conformity with the goals, objectives, and policies of the General Plan related to public services and utilities. The potential for adverse impacts on utilities has been evaluated based on information concerning current service levels and the ability of the service providers to accommodate the increased demand created by the proposed project.

Service letters and questionnaires were sent to the applicable service and utilities providers concerning the development of the proposed project. The responses were used to determine levels of significance of the impacts on services and utilities as a result of the proposed project.

Significance Criteria

The criteria used to determine the significance of an impact are based on the Initial Study Checklist in Appendix G of the *CEQA Guidelines* and City precedent. Several criteria were eliminated from further consideration because the proposed project: (1) would not require the construction of a new storm water drainage facility or expansion of an existing facility; and (2) would comply with federal, state, and local statutes and regulations related to solid waste. These issues therefore will not be discussed here. Please refer to the Initial Study (Appendix A) for further clarification. For this analysis, the proposed project may result in significant impacts if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant

⁹ City of Long Beach, City of Long Beach Municipal Code (Ord. C-5831 § 1, 1982), Chapter 21, available at <http://www.longbrach.gov/apps/cityclerk/lbmc/title-21/frame.htm>, 1982.

environmental impacts in order to maintain acceptable service ratios, response times, capacity, or other performance objectives for any of the following public services and utilities:

- Fire Protection;
- Police Protection;
- Schools; and
- Exceed wastewater treatment requirements of the RWQCB;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's demand in addition to the provider's existing commitments;
- Have sufficient water available to serve the project from existing entitlements and resources; and
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.

Project Impacts

Impact 3J.1: Could the proposed project significantly increase the demand for local fire protection services?

The proposed project could result in an increase in response calls to the project site from the LBFD. The proposed development has the potential for a loss of life in the event of a structure fire. This fire safety problem could also present a threat to nearby properties. This type of fire safety problem is similar in nature to any multi-story building such as the existing hotel and would be effectively handled through such standard measures as sprinklers, the notification and control of retail/restaurant patrons and employees, and the control and evacuation of smoke from the structure.¹⁰

While an increase in the need for fire protection services to the site would be anticipated with the proposed project, the LBFD predicts that it will be able to absorb this additional demand.¹¹ The proposed project, in and of itself, would not significantly impact the LBFD. The proposed project would not appreciably increase fire service needs to the point where acceptable service ratios, response times, or other performance objectives would be compromised or that there would be a need for the expansion or construction of additional fire service facilities. The impact to fire services is less than significant and mitigation is not required.

Conclusion: The proposed project would have a less than significant impact on the demand for local fire protection services.

Mitigation: None required.

¹⁰ Giles, Scott, Deputy Chief/Fire Marshall, City of Long Beach Fire Department, letter to ESA June 8, 2005.

¹¹ *Ibid.*

Significance After Mitigation: Less than significant.

Impact 3J.2: Could the proposed project significantly increase the demand for local police services?

According to the LBPD, the project area does not contain any potential safety or security problems in the site vicinity. The main thoroughfares of PCH and Second Street provide emergency access.¹²

The resulting addition of 170,000 square feet of retail development and 425 residential units would increase demand on police services. The site location is in an area of the City that has a fairly low crime rate. Any calls for police service would likely involve some petty thefts from retail establishments, unwelcome persons on the property, etc. Calls generated from the new housing units that could be of any type and are difficult to predict.

The proposed project would not appreciably increase police service needs to the point where acceptable service ratios, response times, or other performance objectives would be compromised or that there would be a need for the expansion or construction of additional police service facilities. The impact to police services is less than significant and mitigation is not required. The project's impact to public police protection services would be less than significant.¹³

Conclusion: The proposed project would have a less than significant impact on the demand for local police services.

Mitigation: None required.

Significance After Mitigation: Less than significant.

Impact 3J.3: Could the proposed project result in a significant increase in the demand for local schools?

The proposed project would develop 425 new residential units. In order to provide a conservative analysis, all students are assumed to attend local public schools rather than apply for permits to attend public schools elsewhere or attend private schools.

¹² Batts, Anthony, Chief of Police, City of Long Beach Police Department, letter to ESA June 22, 2005.

¹³ *Ibid.*

Based on the current student generation factors for multi-family residential uses, an estimated 12 total students would be generated by the proposed project (see **Table 3J.3**). Of the 12 estimated students, six students would be in elementary school, three students would be in middle school, and three students would be in high school.

**TABLE 3J.3
PROPOSED PROJECT STUDENT GENERATION**

| Project Use | Elementary | | Middle | | High | |
|---------------------------------|------------|----------|--------|----------|--------|-----------|
| | Factor | Students | Factor | Students | Factor | Students |
| 425 Multi-Family Residences | 0.013 | 6 | 0.005 | 3 | 0.005 | 3 |
| Total Project Generation | | | | | | 12 |

SOURCE: LBUSD, *Development Impact Fee Nexus Study, Draft Report*, May 10, 2004.

The schools that students from the proposed project would attend are Kettering Elementary School, Hill Classical Middle School, and Wilson High School.

As discussed above, the LBUSD's existing capacity is 74,192 seats and enrollment is 97,560 students. Current enrollment exceeds LBUSD's capacity by 23,368 seats. Payment of fees would mitigate potential impacts, as required by standard regulatory controls. The impact to schools is less than significant and further mitigation beyond payment of fees is not required.

Conclusion: The proposed project would have a less than significant impact on the demand for local schools.

Mitigation: None required.

Significance After Mitigation: Less than significant.

Impact 3J.4: Could the proposed project result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project or result in the construction of new facilities or expansion of existing facilities?

The proposed project would replace an existing hotel with approximately 170,000 square feet of retail uses and 425 residential units. The existing uses currently generate approximately 37,000 gallons wastewater per day. Under the proposed project,

wastewater generation would increase to about 101,150 gallons per day, as shown in **Table 3J.4**.¹⁴

**TABLE 3J.4
PROPOSED PROJECT WASTEWATER GENERATION**

| Land Use | Floor Area or Unit | Factor | Proposed Wastewater Generation |
|-----------------------------|---------------------|----------------------------|--------------------------------|
| Retail | 170,000 square feet | 223 gpd/1,000 square feet | 37,910 gpd |
| Residential | 425 units | 85 gpd/person ^a | 63,240 gpd |
| Total Project Demand | | | 101,150 gpd |

^{a)} Residential occupancy is assumed to be 744 and is assumed to be 1.75 persons per unit.

SOURCE: ESA, 2006.

Currently, a majority of the City's wastewater is delivered to the LACSD Joint Water Pollution Control Plant that has a design capacity of 385 mgd and currently processes an average flow of 350 mgd.¹⁵ The remaining portion of the City's wastewater is delivered to the Long Beach Water Reclamation Plant. The plant provides treatment for approximately 25 mgd of wastewater. The total daily flow of wastewater in the City is 347.7 mgd with a capacity of 410 mgd. The proposed project's additional contribution of 64,150 gpd would increase the current wastewater treatment needs of the City by 0.5 percent.

Given that the City currently has 62.3 mgd of additional capacity to treat wastewater; the proposed project would not result in the construction or expansion of new wastewater treatment facilities. Impacts would be less than significant, and mitigation would not be required.

Conclusion: The proposed project would have a less than significant impact on the demand for wastewater treatment.

Mitigation: None required.

Significance After Mitigation: Less than significant.

¹⁴ Proposed uses are commercial land use involving 170,000 square feet and residential land uses that include 425 units. Wastewater generation factor for commercial use is 223 gpd/1000 square feet and 85 gpd/person based on generation factors approved by City of Long Beach Douglas Park EIR per consultation with Jill Griffiths.

¹⁵ Information obtained from http://www.lbwater.org/sewers/sewage_treatment.html on June 8, 2006.

Impact 3J.5: Could the proposed project result in a determination by the water provider that it has inadequate capacity to serve the project or result in the construction of new facilities or expansion of existing facilities?

The existing uses currently require approximately 37,500 gallons of water per day. As shown in **Table 3J.5**, the proposed project would result in consumption of 115,840 gallons of water per day, an increase of 78,340 gallons of water per day.

**TABLE 3J.5
PROPOSED PROJECT WATER CONSUMPTION**

| Land Use | Floor Area or Unit | Factor | Proposed Water Demand |
|-----------------------------|---------------------|-----------------------------|-----------------------|
| Retail | 170,000 square feet | 200 gpd/1,000 square feet | 34,000 gpd |
| Residential | 425 units | 110 gpd/person ^a | 81,840 gpd |
| Total Project Demand | | | 115,840 gpd |

^{a)} Residential occupancy is assumed to be 744 and is assumed to be 1.75 persons per unit.

SOURCE: ESA, 2006.

The LBWD provides 100 percent of the City's water needs, mixing locally developed water from LBWD operated wells with water from the MWD. The LBWD is considering new water sources, including desalination, and has developed plans to increase the water supply in the future as population growth demands.

The LBWD has indicated that there are sufficient supplies to serve the proposed project from existing entitlements and resources. The proposed project would not be expected to exceed existing entitlements allocated for the City. The impact would be less than significant and no mitigation is required.

Conclusion: The proposed project would have a less than significant impact on the demand for water.

Mitigation: None required.

Significance After Mitigation: Less than significant.

Impact 3J.6: Could the proposed project result in significant increase the amount of solid waste that would require disposal at a landfill?

Both the construction and operational phases of the proposed project would be expected to generate refuse requiring disposal in accordance with local and state laws, including recycling requirements. The proposed project would replace a 250-room hotel with

approximately 170,000 square feet of retail uses and 425 residential units. The existing uses currently generate approximately 1,000 pounds per day of solid waste.

Construction of the proposed project would require the demolition of the approximately 164,736 square feet hotel and generate refuse from building debris. All ACMs would be removed by a California State licensed contractor and disposed in accordance with applicable laws and regulations prior to commencement of other demolition activities. Most of the non-hazardous demolition material would likely be disposed of at unclassified landfills. The unclassified landfills that accept such materials have sufficient capacity to accommodate the disposal materials that would be generated by demolition of existing on-site structures, as shown in Table 3J.2. Regardless, demolition of the existing hotel buildings would require incorporation of mitigation measures to ensure compliance with AB 939.

The proposed project would increase solid waste generation to approximately 2,720 pounds per day, for an additional 1,720 pounds per day of solid waste, as shown below in **Table 3J.6**.

TABLE 3J.6
ESTIMATED SOLID WASTE GENERATION RATES

| Land Use | Generation Rate | Units of Measurement | Area or Units | Solid Waste Generation (lbs/day) |
|--------------|-----------------|----------------------|---------------|----------------------------------|
| Retail | 0.006 | lb/square feet/day | 170,000 | 1,020 |
| Residential | 4 | lb/dwelling unit/day | 425 | 1,700 |
| Total | | | | 2,720 |

SOURCE: CIWMB, *Estimated Solid Waste Generation Rates for Residential Developments and Commercial Establishments*, 2004.

Project operation would result in approximately 511 tons per year or approximately 1.4 tpd to be committed to Class III landfills or other waste disposal facilities. This amount represents approximately 0.00008 percent increase in the total solid waste disposed of within the City (2002).

Given the percentage increase of solid waste disposal as a result of project implementation, the regional landfills have sufficient short-term capacity to accommodate the additional demand for solid waste disposal facilities. Project impacts related to permitted solid waste capacity would be less than significant.

As previously stated, AB 939 requires that every city and county in California implement programs to recycle, reduce refuse at the source, and compost waste to achieve diversion goals. In order to assist in meeting these goals, the proposed project would be required to incorporate storage and collection of recyclable materials into the project design and include provisions for the collection of recyclables in refuse collection

contracts. Mitigation measures would assist the City in its effort to meet its waste reduction goals by facilitating recycling on-site.

Conclusion: The proposed project with incorporation of mitigation measures would have a less than significant impact on the amount of solid waste that would require disposal at a landfill.

Mitigation Measures

Measure 3J.1: Prior to the issuance of any demolition permit, a Solid Waste Management Plan for the proposed project shall be developed and submitted to the City of Long Beach Environmental Services Bureau for review and approval. The plan shall identify methods for promoting recycling and reuse of construction materials and safe disposal consistent with the policies and programs outlined by the City of Long Beach. The plan shall identify methods for incorporating source reduction and recycling techniques into project construction and operation in compliance with state and local requirements such as AB 939.

Measure 3J.2: Prior to the issuance of any building permits, the City of Long Beach Director of Planning and Building shall verify that adequate storage space for the collection and loading of recyclable materials and waste collection points throughout the site has been included in the design of the buildings to encourage recycling.

Significance After Mitigation: Less than significant.

Cumulative Impacts

Impact 3J.7: Could the proposed project result in a cumulative impact to public services and utilities?

The incremental impacts of the proposed project to public services and utilities, when considered with the past, present, or reasonably foreseeable, probable future projects listed in Table 2.2 are discussed below:

Fire Services

Similar to the proposed project, related projects included in Table 2.3 would likely include specific features designed to reduce impacts on fire protection. In addition, these projects will be evaluated on an individual basis to determine appropriate mitigation measures that would address new demand. Furthermore, the need for additional fire protection services associated with cumulative growth may be addressed through the City's annual budgeting process and capital improvements programs, if determined that service improvements are necessary.

While the City has no impact fee to fund fire services, these services can continue to be funded through the General City Fund. Development of the project site will bring additional annual revenue to the City in the form of increased local property taxes assessed on the new residential and commercial development that will offset the increased demand for police and fire services. Each service provider has a separate process for review and upgrade of staff and facilities independent of the development review process. In this manner the City maintains the necessary levels of service. Therefore, combined cumulative impact associated with the project's and related projects effect on fire services would be less than significant.

Police Services

Similar to the proposed project, related projects included in Table 2.3 would likely include specific features designed to reduce impacts on police protection. In addition, these projects will be evaluated on an individual basis to determine appropriate mitigation measures that would address new demand. Furthermore, the need for additional police protection services associated with cumulative growth may be addressed through the City's annual budgeting process and capital improvements programs, if determined that service improvements are necessary.

While the City has no impact fee to fund police services, these services can continue to be funded through the General City Fund. Development of the project site will bring additional annual revenue to the City in the form of increased local property taxes assessed on the new residential and commercial development that will offset the increased demand for police and fire services. Each service provider has a separate process for review and upgrade of staff and facilities independent of the development review process. In this manner the City maintains the necessary levels of service. Therefore, combined cumulative impact associated with the project's and related projects effect on fire services would be less than significant.

Therefore, the combined cumulative impact associated with the project's and related projects effect on police protection services would be less than significant.

Schools

None of the other related projects included in Table 2.3 are residential and therefore would not expect to generate new students. Therefore, cumulative impacts to schools would be less than significant.

Wastewater

The anticipated wastewater generation associated with the implementation of the proposed project and related projects is shown in **Table 3J.7**.

**TABLE 3J.7
CUMULATIVE PROJECT WASTEWATER GENERATION**

| Land Use | Floor Area or Unit | Factor | Proposed Wastewater Generation |
|--|-----------------------|----------------------------|--------------------------------|
| Proposed Project | | | |
| Retail | 170,000 square feet | 223 gpd/1,000 square feet | 37,910 gpd |
| Residential | 425 units | 85 gpd/person ^a | 63,240 gpd |
| Boeing Seal Beach | | | |
| Business Park | 2,625,815 square feet | 223 gpd/1000 square feet | 585,557 gpd |
| Retail | 198,020 square feet | 223 gpd/1,000 square feet | 44,158 gpd |
| Hotel | 120 rooms | 150 gpd/room | 18,000 gpd |
| Home Depot (retail) | 157,529 square feet | 223 gpd/1,000 square feet | 35,129 gpd |
| Marina Shores East (retail) | 73,000 square feet | 223 gpd/1,000 square feet | 16,279 gpd |
| Total Cumulative Project Demand | | | 800,273 gpd |

a. Residential occupancy: 744 persons and is assumed to be 1.75 persons per unit.

b. Proposed uses are commercial land use involving 170,000 square feet and residential land uses that include 425 units. Wastewater generation factor for commercial use is 223 g/1000 square feet/day, 85 gpd and 150 gpd/room based on generation factors approved by City of Long Beach Douglas Park EIR per consultation with Jill Griffiths.

SOURCE: ESA, 2006.

The LBWD operates and maintains nearly 765 miles of sanitary sewer line to safely and expeditiously deliver over 40 million gpd to LACSD facilities located on the north and south sides of the City of Long Beach. Currently, a majority of the City's wastewater is delivered to the Joint Water Pollution Control Plant (JWPCP) of the LACSD, which is the largest of the Los Angeles County Sanitation Districts' wastewater treatment plants. The remaining portion of the City's wastewater is delivered to the Long Beach Water Reclamation Plant of the LACSD that provides treatment for 25 million gallons of wastewater per day.

Like most urbanized cities throughout the country, the majority of the City's water and wastewater distribution systems were laid in the early 1900's. After almost a century of use, much of the City's 915 miles of water and 765 miles of sewer lines are nearing the end of their useful service life. A city can have no greater need for dependable infrastructure than that of its water and wastewater distribution systems. Its direct effect on a city's quality of environment, public health and economy attests to its importance. Through prudent investment and the use of state-of-the-art equipment, the City's capital construction projects will ensure that wastewater treatment is provided for existing and future demands.

As previously stated, the total daily flow of wastewater in the City is 347.7 mgd with a capacity of 410 mgd. The proposed project's additional contribution of 64,240 gpd would increase the current wastewater treatment needs of the City by 0.5 percent, a considerably insignificant impact to existing capacity. However, as shown in Table 3J.7,

other projects in the area will generate further wastewater treatment demands on the City. The City recognizes the city is growing and will continue to grow, and as such, the LBWD is proactively planning for future expansion of capacity and extension of wastewater service lines to accommodate that growth through its committed capital construction projects.¹⁶

Therefore, cumulative impacts of the proposed project and related projects would be less than significant.

Mitigation: None required.

Significance After Mitigation: Less than significant.

Water

The anticipated water consumption associated with implementation of the proposed project and related projects included in Table 2.3 is shown on **Table 3J.8** below.

**TABLE 3J.8
CUMULATIVE PROJECT WATER CONSUMPTION**

| Land Use | Floor Area or Unit | Factor | Proposed Water Demand |
|-----------------------------|-----------------------|-----------------------------|-----------------------|
| Proposed Project | | | |
| Retail | 170,000 square feet | 200 gpd/1,000 square feet | 34,000 |
| Residential | 425 units | 110 gpd/person ^a | 81,840 |
| Boeing Seal Beach | | | |
| Business Park | 2,625,815 square feet | 200 gpd/1,000 square feet | 525,163 |
| Retail | 198,020 square feet | 200 gpd/1,000 square feet | 39,604 |
| Hotel | 120 rooms | 144 gpd/room | 17,280 |
| Home Depot (retail) | 157,529 square feet | 200 gpd/1,000 square feet | 31,506 |
| Marina Shores East (retail) | 73,000 square feet | 200 gpd/1,000 square feet | 14,600 |
| Total Project Demand | | | 743,993 |

a) Residential occupancy is assumed to be 744 and is assumed to be 1.75 persons per unit.

SOURCE: ESA, 2006.

The LBWD provides 100 percent of the City's water needs, mixing locally developed water from LBWD operated wells with water from the MWD. The LBWD is considering new water sources, including desalination, and has developed plans to increase the water supply in the future as population growth demands.

¹⁶ Long Beach Water Department official website: <http://www.lbwater.org/projects/ccp.html>, retrieved on June 6, 2006.

With groundwater making up 48 percent of City's water supply, the LBWD is aggressively implementing work on a \$4.5 million MWD-conjunctive use infrastructure project that would construct wells to supply existing and future water demand. Furthermore, with the City's extensive water conservation and water recycling programs being implemented throughout the city, water supply can meet cumulative projects demand for water.

Furthermore, with imported water making up 52 percent of City's water supply, the LBWD is actively involved in state and region-wide policy development in ensuring imported water supply is provided to meet the City's demand for water now and in the future.

Therefore, cumulative impacts of the proposed project and related projects would be less than significant.

Mitigation: None required.

Significance After Mitigation: Less than significant.

Solid Waste

Other related projects in the area would also generate an increased demand for landfill capacity during construction and operation. Similar to the proposed project, these projects are expected to recycle and reuse a large portion of the construction debris, thereby reducing the amount of material disposed of at area landfills.

Operational solid waste generation of the related projects and the proposed project are shown in **Table 3J.9**.

**TABLE 3J.9
ESTIMATED SOLID WASTE CUMULATIVE GENERATION RATES**

| Project | Generation Rate | Units of Measurement | Area or Units | Solid Waste Generation (lb/day) |
|-----------------------------|------------------------|-----------------------------|----------------------------------|--|
| Proposed Project | | | | |
| Retail | 0.006 | lb/square feet/day | 170,000 square feet | 1,020 |
| Residential | 4 | lb/dwelling unit/day | 425 units | 1,700 |
| Boeing Seal Beach | | | | |
| Business Park | 0.006 | lb/square feet/day | 2,625,815 square feet | 15,755 |
| Retail | 0.006 | lb/square feet/day | | 1,188 |
| Hotel | 4 | lb/room | 198,020 square feet 120 rooms | 480 |
| Home Depot (retail) | 0.006 | lb/square feet/day | 157,529 square feet | 945 |
| Marina Shores East (retail) | 0.006 | lb/square feet/day | 73,000 square feet | 437 |
| Total | | | | 21,525 |

SOURCE: CIWMB, *Estimated Solid Waste Generation Rates for Residential Developments and Commercial Establishments*, 2004.

This is a gross estimate that does not consider the solid waste disposal demand from the existing land uses that will be displaced by the related projects.

Over the life of projects developed or redeveloped in the project area, solid waste would continue to be generated from residents, retail shops and offices. Recycling bins and centers are provided and the City of Long Beach Environmental Services Bureau is responsible for recycling the collected materials.¹⁷ In addition to recyclables, the City of Long Beach Environmental Services Bureau has waste collection centers and weekend round-ups available to dispose of household hazardous material (paint, solvents, etc.), computers and electronics.¹⁸

Source reduction and recycling is the responsibility of all residents and commercial business, requiring an on-going effort to minimize waste. With the City's implementation of its CIWMP, the City implementing its source reduction and recycling programs, and residents and businesses participating, cumulative impacts to solid waste disposal would be less than significant.

Mitigation: None required.

Significance After Mitigation: Less than significant.

¹⁷ Long Beach Environmental Services Bureau official website:
<http://cms.longbeach.gov/irb/home/index.htm>, retrieved on June 7, 2006.

¹⁸ *Ibid.*

3K. Recreation

This section provides the recreational setting of the project and an analysis of potential impacts that project implementation might have on existing recreation facilities. Where impacts are identified to be significant, mitigation measures are recommended to reduce these impacts to acceptable levels. The following analysis is based on the City of Long Beach Open Space and Recreation Element of the General Plan, the Long Beach Department of Parks, Recreation, and Marine Departmental Strategic Plan, and municipal code.^{1,2,3}

3K.1 Environmental Setting

The City of Long Beach has recreational resources including parks, community centers, golf courses, bike and equestrian trails, numerous special use recreation resources and coastal amenities.⁴

The City has 111 parks encompassing 1,472-acres, including:⁵

- Mini parks (27-acres)
- Greenbelt parks (86-acres) – undeveloped green spaces.
- Neighborhood parks (156-acres)
- Community parks (464-acres)
- El Dorado Regional Park (401-acres)
- Special Use Parks (339-acres) (i.e., riverfront recreation vehicle campground, marine biological reserves, etc.)

In addition to parks, the City has a number of special facilities that provide recreational and leisure opportunities. These include a riverfront campground, two historic ranchos, the Long Beach Museum of Art, two marine biological reserves, two special events parks, the park at Colorado Lagoon, and Shoreline, Santa Cruz and Victory parks. The City also manages water recreation areas, including five public boat launches, the Alamitos Bay, and Marine Stadium. In addition, there are five public golf courses located within the City.

Within the City, there are approximately 5.6-acres of recreation open space for every 1,000 residents.⁶ This is substantially below the average of 13-acres per 1,000 residents

¹ City of Long Beach, *Open Space and Recreational Element of the General Plan*, October 2002.

² City of Long Beach, Department of Parks, *Recreation & Marine Strategic Plan*, April 2003.

³ City of Long Beach, *Southeast Area Development and Improvement Plan*, February 3, 2005.

⁴ *Ibid.*

⁵ Dennis Eschen, City of Long Beach, Department of Parks, Recreation and Marine, June 30, 2006.

⁶ City of Long Beach, *Southeast Area Development and Improvement Plan*, February 3, 2005.

for comparably sized cities and somewhat below the average of seven acres per 1,000 residents in more dense cities.⁷ The City's development pattern and population density makes it difficult to develop park space, given the high demand for land area. Needs for housing, commercial space, and public services compete for limited space. Long Beach falls well below the average in park area compared to total city area – 7.9 percent of Long Beach is park compared to the average of 10.9 percent for comparably sized cities in the U.S.⁸

The nearest park facility to the project site is Mossy Kent Park that is located in Basin 2 of the Alamitos Bay Marina. Amenities include an activity center, beaches, boat facilities, coastal viewing, picnic tables, a playground, swimming, and volleyball.

3K.2 Regulatory Background

Long Beach General Plan

The City of Long Beach Open Space and Recreation Element of the General Plan lists major issues associated with open space and recreation in the City and the City's goals, objectives, and policies associated with each issue. The Open Space and Recreation Element focuses on preserving existing natural resources, managing natural resources in a responsible way, providing appropriate open spaces to protect the public health and safety, and providing adequate public recreational opportunities.

The project site designated in the General Plan as LUN No. 7 and zoned PD-1 (SEADIP). The PD-1 (SEADIP) zoning requires that a minimum of 30 percent of the project site be developed and maintained as useable open space. This does not include building footprint, streets or parking areas, and sidewalks adjacent to streets should not be considered usable open space. In addition, bicycle and pedestrian trails not included within the public right-of-way can be considered usable open space.

Department of Parks, Recreation, and Marine

The Long Beach Department of Parks, Recreation, and Marine has developed a Departmental Strategic Plan, with the purpose to identify core values and services, develop a new mission statement and new goals, identify opportunities for, and obstacles to, service delivery, and develop strategies for the achievement of goals. City goals identified in the Strategic Plan include:

- Ensure open space parks and recreational facilities meet community needs;
- Ensure city parks and recreational facilities provide a positive experience and image;

⁷ City of Long Beach, Department of Parks, Recreation & Marine Strategic Plan, April 2003.

⁸ *Ibid.*

- Ensure recreational programming, leisure opportunities, and community services meet the diverse needs and interests of residents and visitors;
- Ensure beaches, waterways, and marine amenities are accessible and provide a positive experience and image;
- Ensure marinas are fiscally sound and meet boat owner and community needs; and
- Facilitate and encourage productive service to the community through the department's management, philosophy, structure, culture, and employees.

The Strategic Plan states a Citywide target of eight acres of park land for every 1,000 residents. Approximately 1,080 acres of new park land would be needed to meet this target for the current population, with an additional 231 acres of park land needed by 2010 to keep pace with projected population growth.

Municipal Code

Chapter 18.18 of Title 18 of the City of Long Beach Municipal Code regulates parks and recreation facilities fees. The purpose of Chapter 18.18 is to impose a park fee on new residential development to assure that the City's park land and recreational facility standards are met with respect to the additional needs created by residential development. The fee is established by resolution of the City council. The current fee is \$2,070 per multi-family dwelling unit.

3K.3 Environmental Impacts and Mitigation Measures

Methodology

Recreation impacts are assessed based upon the City of Long Beach's planning standards for recreation facilities. Specifically, this section of the EIR addresses issues relating to recreational facilities and the provision of recreation programs and services that might be affected by the proposed project.

Significance Criteria

The criteria used to determine the significance of an impact are based on the Initial Study Checklist in Appendix G of the *CEQA Guidelines* and City precedent.

For this analysis, the proposed project may result in significant impacts if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility(s) would occur or be accelerated; or
- Require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Project Impacts

Impact 3K.1: Could implementation of the proposed project conflict with City of Long Beach Recreation and Open Space objectives?

The proposed project would include 425 residential units and approximately 170,000 square feet of retail development. The project would include a detailed landscaping plan consisting of a combination of trees, shrubs, and groundcover. In total, the project site includes approximately 20 percent open space. Although this would not alleviate the City's existing open space deficiencies, it would provide private on-site recreational amenities for residents and public open space areas for the public.

The proposed project would include private recreation areas for the residents (a pool in Block A, a pool in Block B and a recreation/fitness center and pocket park with a spa in Block C). It is anticipated that future residents would seek additional recreational opportunities off-site.

Although implementation of the project would not result in the loss of park land or open space, the proposed project would not fully satisfy the requirements for 30 percent of the site to be open space in PD-1 (SEADIP). However, the proposed project does include the following recreation/open space amenities:

- One public plaza along Second Street and two along Marina Drive
- Establishment of a bike trail connection and a pedestrian crossing at Second Street and Marina Drive on the northwest side of the intersection.
- A landscaped Class 1 bike trail and pedestrian sidewalk on the southwest side of Marina Drive (from Second Street to Studebaker) and improvements to pedestrian sidewalks.
- Extension of an off-street bike trail and a pedestrian sidewalk and crossing to Studebaker Road on the southwest side of Marina Drive.

In addition, the project includes landscape improvements to off-site public areas along Marina Drive and throughout the marina parking lot, west of the site.

The City of Long Beach requires the dedication of park land or payment of a fee in lieu of park land dedication. With payment of the City in-lieu fees, recreation and open space impacts associated with the project would be less than significant.

Conclusion: Implementation of the proposed project with incorporation of mitigation would not conflict with the City of Long Beach Recreation and Open Space objectives.

Mitigation Measures

Measure 3K.1: The proposed project shall pay a per dwelling unit fee to the City of Long Beach in lieu of park land dedication in accordance with the City's Municipal Code Chapter 18.18.

Significance After Mitigation: Less than significant.

Cumulative Impacts

Impact 3K.2: Could the proposed project result in an adverse cumulative recreation and open space impact?

The proposed project together with related residential projects within the project vicinity would increase the population in the City of Long Beach. Similar to the proposed project, related projects would be required to provide recreational facilities or pay an in-lieu fee. As such, cumulative recreation and open space impacts would be less than significant.

Conclusion: The proposed project would not contribute in an adverse cumulative recreation and open space impact.

Mitigation: None required.

Significance After Mitigation: Less than significant.

3L. Transportation and Circulation

As a result of the analysis undertaken in the Initial Study for the proposed project, the City Department of Planning and Building determined that the proposed project might result in environmental impacts to transportation and circulation. This issue is being carried forward from the Initial Study conducted for the project for detailed analysis in this EIR. This analysis was undertaken to identify opportunities to avoid, reduce, or otherwise mitigate potential significant impacts to transportation and circulation and to identify potential alternatives.

The analysis of transportation and circulation includes a description of the environmental setting of the project area, regulatory background that guides the decision-making process, and thresholds for determining if the proposed project would result in significant impacts, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and level of significance after mitigation.

Transportation and circulation at the project site were evaluated in accordance with the City of Long Beach General Plan and the County of Los Angeles Congestion Management Plan (CMP). The full technical impact report is presented in Appendix D.¹

3L.1 Environmental Setting

The following describes the existing transportation conditions in the vicinity of the project site. It includes an analysis of the traffic circulation characteristics of the 25 study intersections. The 25 study intersections are as follows:

- Second Street/Bay Shore Avenue
- Second Street/Livingston Drive
- Second Street/Marina Drive
- Second Street/Naples Avenue
- Second Street/PCH
- Second Street/Shopkeeper Road
- Seventh Street/Bellflower Boulevard
- Seventh Street/PCH
- Seventh Street/Park Avenue
- Anaheim Street/PCH
- Anaheim Street/Studebaker Road

¹ Meyer, Mohaddes Associates, *Seaport Marina Project Traffic Impact Report*, 2006.

- Atherton Street/Bellflower Boulevard
- Loynes Drive/PCH
- Loynes Drive/Studebaker Road
- Main/Bolsa Avenue/PCH (City of Seal Beach)
- Marina Drive/PCH (City of Seal Beach)
- Marina Drive/Studebaker Road
- PCH/Bellflower Boulevard
- PCH/Clark Avenue
- Seal Beach Boulevard/PCH (City of Seal Beach)
- SR-22 eastbound on-ramp/Studebaker Road
- SR-22 westbound on-ramp/Studebaker Road
- Studebaker Road/PCH
- Westminster Avenue/Seal Beach Blvd (City of Seal Beach)

Figure 3L.1 depicts the study area, the locations of the analyzed intersections, and the location of the proposed project. Based on consultation with the City of Long Beach, these 25 key intersections were selected for analysis and deemed most likely to experience significant impacts from the proposed project implementation and therefore warrant detailed evaluation in this section of the EIR. An extensive field review was undertaken to establish existing traffic operations and included review of existing intersection geometric layout, lane configuration, posted speed limits, signal phasing, land uses, curbside parking and bus stop locations.

Regional Roadway System and Street Network

The proposed project is located in the City of Long Beach, County of Los Angeles, California (Figures 2.1 and 2.2). The Seaport Marina project is bounded by Second Street to the north, the Marina Shores Shopping Center to the south, East Marina Drive to the west, PCH to the east, and consists of approximately 10.9 acres of land. The project site is currently developed and is mainly occupied by the Seaport Marina Hotel.

The project site is located approximately five miles east of Downtown Long Beach, one mile south of the San Diego Freeway (I-405), approximately 1.25 miles south of State Route 22 (SR-22), and approximately 5.5 miles southeast of the Long Beach Freeway (I-710). Key roadways, including the ones mentioned above, in the vicinity of the project site are as follows:



Long Beach Marina EIR - 204452
Figure 3L.1
 Location of Study Intersections

- Second Street/Westminster Avenue. This roadway provides an east-west linkage in the traffic impact analysis study area. This arterial, along with PCH, would provide direct access to the project site. The roadway is known as Second Street west of PCH and Westminster Avenue east of PCH. Second Street is classified as a minor arterial west of PCH, and Westminster Avenue is classified as a major arterial east of PCH according to the City's functional classification of streets system. Near the proposed project site, Second Street has three lanes in both the eastbound and westbound direction with a posted speed limit of 35 mph. The average daily traffic (ADT) along Second Street in the study area ranges between 40,000 and 45,000 vehicles per day.
- PCH. This highway provides a direct north-south linkage to the proposed project's eastern access point. PCH is classified as a regional corridor (also known as State Route 1). Adjacent to the project site, PCH includes three lanes in both the northbound and southbound directions. The posted speed limit ranges between 40 and 50 mph. The ADT in the study area along PCH ranges between 40,000 and 45,000 vehicles per day.
- Studebaker Road. This road provides an indirect north-south linkage to the project site via Second Street. Studebaker Road is classified as a major arterial with PCH to its west and Seal Beach Boulevard to the east. Near the project site, Studebaker Road has two lanes traveling in both the northbound and southbound directions. The posted speed limit ranges between 45 and 50 mph. The ADT in the study area along Studebaker Road ranges between 35,000 and 40,000 vehicles per day.
- Seventh Street. This street provides an indirect east-west linkage to the project site via PCH. Seventh Street is classified as a major arterial with three lanes in both the eastbound and westbound directions. The posted speed limit ranges between 35 and 40 mph. The ADT to the west of PCH ranges between 45,001 and 50,000 vehicles per day, and the ADT to the east of PCH ranges between 55,000 and 60,000 vehicles per day.
- Bellflower Boulevard. This boulevard provides an indirect north-south linkage to the project site via PCH. Bellflower Boulevard is classified as a major arterial with three lanes in both the northbound and southbound direction. The posted speed limit is 40 MPH, and the ADT ranges between 20,000 and 25,000 vehicles per day.

Intersections Traffic Volumes

Turning movement traffic counts were collected during the morning (7 to 9 AM) and afternoon (4 to 6 PM) peak periods during a weekday, and during the mid-day (1 to 3 PM) on Saturday. Traffic counts were collected during the summer and also when school was in session in the fall. The traffic counts show that the weekday traffic volumes were highest during the school period (fall), and Saturday counts were highest during the summer. Therefore, this traffic study analyzes the peak traffic periods, including the summer Saturday and fall weekday.

Traffic Operations

The efficiency of traffic operations at a location is measured in terms of level of service (LOS). LOS is a description of traffic performance at intersections. The LOS concept is a measure of average operating conditions at intersections during an hour. It is based on volume-to-capacity (V/C) ratio. Levels range from A to F with A representing excellent (free-flow) conditions and F representing extreme congestion. The Intersection Capacity Utilization (ICU) methodology compares the level of traffic during the peak hours at an intersection to the amount of traffic that intersection is able to carry (capacity).

Intersections with vehicular volumes that are at or near capacity (V/C 1.000) experience greater congestion and longer vehicle delays. **Table 3L.1** describes the LOS concept and the operating conditions expected under each LOS for signalized intersections.

**TABLE 3L.1
LOS DEFINITIONS**

| LOS | Interpretation | V/C |
|-----|--|---------------|
| A | Excellent operation – free flow | 0.000 – 0.600 |
| B | Very good operation – stable flow, little or no delays | 0.601 – 0.700 |
| C | Good operation – slight delays | 0.701 – 0.800 |
| D | Fair operation – noticeable delays, queuing observed | 0.801 – 0.900 |
| E | Poor operation – long delays, near or at capacity | 0.901 – 1.000 |
| F | Forced flow – congestion | Over 1.000 |

SOURCE: Highway Capacity Manual, Special Report 209, Transportation Research Board, Washington D.C., 1985 and Interim Materials on Highway Capacity, NCHRP Circular 212, 1982.

The City of Long Beach requirements state that the ICU calculations use a lane capacity of 1,600 vehicles per hour (vph) for left turn, through, and right turn lanes; and dual left turn lanes have a capacity of 2,880 vph. An adjustment for clearance intervals are based in the number of phases in the intersection and whether the left turn movements are permitted or protected. The clearance intervals range from 0.10 to 0.18 seconds between signal phases during which an intersection is not used by any traffic.

Four of the 25 study intersections are located within the City of Seal Beach and were evaluated in conformance with the City of Seal Beach requirements. Per City of Seal Beach requirements, the signalized intersections were also analyzed using the ICU methodology, but with a lane capacity of 1,700 vph for left-turn, through and right-turn lanes, and a dual left-turn capacity of 3,400 vph. A clearance adjustment factor of 0.05 percent of signal cycle was added to each level of service calculation between

signal phases during which an intersection was not used by any traffic. These four study intersections are:

- Second Street/Westminster Avenue/Seal Beach Boulevard
- Marina Drive/PCH
- PCH/Bolsa Avenue/Main Street
- PCH/Seal Beach Boulevard

Analysis of unsignalized intersections is conducted differently from signalized intersections due to different operating characteristics. Stop controlled intersections are analyzed using the delay-based Highway Capacity Manual (HCM) method of determining LOS.

Table 3L.2 describes the LOS concept for unsignalized intersections.

**TABLE 3L.2
LOS CRITERIA FOR UNSIGNALIZED INTERSECTIONS**

| LOS | HCM Average Control Delay (sec/veh) | LOS Description |
|-----|-------------------------------------|--------------------------|
| A | < 10 | Little or no delay |
| B | > 10 and ≤ 15 | Short traffic delays |
| C | > 15 and ≤ 25 | Average traffic delays |
| D | > 25 and ≤ 35 | Long traffic delays |
| E | > 35 and ≤ 50 | Very long traffic delays |
| F | > 50 | Severe congestion |

SOURCE: Meyer, Mohaddes Associates, *Seaport Marina Project Traffic Impact Report*, 2006.

Intersection Operating Conditions

AM and PM peak-hour LOS analyses were conducted for the 25 study intersections based on the measured traffic volumes, geometric conditions, signal timing, and the methodologies described in the traffic impact analysis. All intersection analyses are performed using the TRAFFIX (Traffic Impact Analysis) software program. The existing conditions LOS analyses results are summarized in **Table 3L.3**.

LOS D is generally considered to be the lowest acceptable LOS in an urban or suburban area. LOS E and F are considered to be unacceptable operating conditions that warrant mitigation. The results, shown in Table 3L.3, indicate that nine of the 25 study intersections are currently operating at LOS E or F during either the AM or PM peak hour or both. The remaining 16 intersections currently operate at LOS D or better. The nine intersections that currently operate at poor service levels are:

- Atherton Street/Bellflower Boulevard (AM peak hour)
- Seventh Street/Park Avenue (AM and PM peak hours)

**TABLE 3L.3
EXISTING INTERSECTION OPERATING CONDITIONS**

| Intersection | | Existing | | | | | | | | |
|--------------|---|--------------|--------------------------|--------------|--------------|--------------------------|--------------|--------------------|--------------------------|--------------|
| | | AM Peak Hour | | | PM Peak Hour | | | Saturday Peak Hour | | |
| | | LOS | Ave. Vehicle Delay | V/C Ratio | LOS | Ave. Vehicle Delay | V/C Ratio | LOS | Ave. Vehicle Delay | V/C Ratio |
| 1 | PCH/Clark Avenue. | C | ---- | .735 | C | ---- | .785 | A | ---- | .529 |
| 2 | Anaheim Street/PCH | A | ---- | .577 | C | ---- | .732 | D | ---- | .825 |
| 3 | Atherton Street/Bellflower Boulevard. | E | ---- | .945 | D | ---- | .89 | B | ---- | .648 |
| 4 | Seventh Street/Park Avenue | F | ---- | 1.035 | E | ---- | .987 | B | ---- | .667 |
| 5 | Seventh Street/PCH | F | ---- | 1.047 | F | ---- | 1.108 | D | ---- | .848 |
| 6 | Seventh Street/Bellflower Boulevard | F | ---- | 1.004 | E | ---- | .937 | C | ---- | .8 |
| 7 | PCH/Bellflower Boulevard | C | ---- | .739 | D | ---- | .821 | C | ---- | .711 |
| 8 | Anaheim Street/Studebaker Road | C | ---- | .768 | C | ---- | .706 | A | ---- | .498 |
| 9 | SR-22 westbound on-ramp/Studebaker Road | C | ---- | .739 | D | ---- | .856 | B | ---- | .683 |
| 10 | SR-22 eastbound on-ramp/Studebaker Road | B | ---- | .662 | C | ---- | .741 | B | ---- | .634 |
| 11 | Loynes Drive/Studebaker Road | C | ---- | .718 | C | ---- | .762 | A | ---- | .598 |
| 12 | Loynes Drive/PCH | D | ---- | .837 | E | ---- | .926 | D | ---- | .85 |
| 13 | Second Street/Livingston Drive | B | ---- | .690 | B | ---- | .626 | A | ---- | .593 |
| 14 | Second Street/Bay Shore Avenue | D | ---- | .818 | E | ---- | .941 | B | ---- | .608 |
| 15 | Second St./Naples Drive | B | ---- | .611 | C | ---- | .776 | B | ---- | .616 |
| 16 | Second Street/ E. Marina Drive | C | ---- | .710 | D | ---- | .849 | C | ---- | .781 |
| 17 | Second Street/PCH | E | ---- | .967 | F | ---- | 1.028 | E | ---- | .928 |
| 18 | Second Street/Shopkeeper Road | B | ---- | .658 | D | ---- | .807 | C | ---- | .763 |
| 19 | Second Street/Studebaker Road | E | ---- | .930 | D | ---- | .889 | C | ---- | .756 |
| 20 | Second Street/ Westminster/Seal Beach Boulevard | B | ---- | .686 | B | ---- | .681 | A | ---- | .446 |
| 21 | Studebaker Road/ Marina Drive | B | 10.9 | ---- | B | 12 | ---- | B | 13.6 | ---- |
| 22 | Studebaker Road/PCH | D | ---- | .844 | E | ---- | .972 | C | ---- | .78 |
| 23 | Marina Drive/PCH | C | 23.6 | ---- | D | 27.6 | ---- | D | 28.5 | ---- |
| 24 | PCH/Bolsa/Main | C | ---- | .718 | C | ---- | .755 | B | ---- | .683 |
| 25 | PCH/Seal Beach | D | ---- | .869 | C | ---- | .761 | C | ---- | .742 |

SOURCE: Meyer, Mohaddes Associates, *Seaport Marina Project Traffic Impact Report*, 2006.

- Seventh Street/PCH (AM and PM peak hours)
- Seventh Street/Bellflower Boulevard (AM and PM peak hours)
- Loynes Drive/PCH (PM peak hour)
- Second Street/Bay Shore Avenue (PM peak hour)
- Second Street/PCH (AM, PM, and Saturday peak hours)
- Second Street/Studebaker Road (AM peak hour)
- Studebaker Road/PCH (PM peak hour)

Existing Transit Service

Two transit agencies provide service around the proposed project site in the Cities of Long Beach and Seal Beach—Long Beach Transit and the Orange County Transportation Authority (OCTA). Long Beach Transit and OCTA operate 22 bus routes together within the boundaries of the proposed project, including the following:

- Long Beach Transit A Passport (Downtown Long Beach to Alamitos Bay). Long Beach Transit A (LBA) runs east to west through the City of Long Beach. It starts at Catalina Landing and travels west along Ocean Boulevard and Second Street to its final destination at Alamitos Bay Landing. Days of operation are Monday through Sunday, including major holidays. The AM and PM peak period headway is approximately 24 minutes. Weekend headway for the mid-day peak period is 30 minutes.
- Long Beach Transit D Passport (Downtown Long Beach to Los Altos). Long Beach Transit D (LBD) runs east to west and north to south through the City of Long Beach. LBD starts at Catalina Landing and travels west along Ocean Boulevard and Second Street. At PCH, LBD travels north to its final destination at the Los Altos Market Center. Days of operation are Monday through Sunday, including major holidays. The AM and PM peak period headway is approximately 24 minutes. Weekend headway for the mid-day peak period is 30 minutes.
- Long Beach Transit Line 45 (Anaheim Street to PCH). Long Beach Transit Line 45 runs east to west through the City of Long Beach starting at Santa Fe Avenue and Anaheim Street and ending at PCH and Anaheim Street. Days of operation are Monday through Friday only. No service is provided Saturday, Sunday, or major holidays. The AM and PM peak period headway is approximately 12 minutes.
- Long Beach Transit Line 46 (Downtown Long Beach to PCH). Long Beach Transit Line 46 runs north to south and east to west through the City starting at Long Beach Transit Mall B. From Transit Mall B, Line 46 travels north along Long Beach Boulevard to Anaheim Street and proceeds east along Anaheim Street to its final destination at PCH. Days of operation are Monday through Sunday, including all major holidays. The AM and PM peak period headway is 12 minutes.

during the weekday. Headway during the weekend mid-day peak period is 12 minutes on Saturday and 15 minutes on Sunday.

- Long Beach Transit Line 81 (Downtown Long Beach to California State University at Long Beach). Long Beach Transit Line 81 runs north to south and east to west through the City. Line 81 starts at the Long Beach Transit Mall and travels north to 10th Street via Pacific Avenue. At 10th and Pacific Avenue, Line 81 travels east to Studebaker Road via 10th Street and Park Avenue and Seventh Street. At Seventh Street and Studebaker Road, Line 81 travels north to its final destination at Atherton. Days of operation are Monday through Friday only. No service is provided Saturday, Sunday, or major holidays. AM and PM peak period headway is approximately 30 minutes.
- Long Beach Transit Line 91 (Downtown Long Beach to the City of Bellflower). Long Beach Transit Line 91 runs east to west and north to south through the City. Line 91 starts at the Long Beach Transit Mall and travels east to Campus Road via Seventh Street. At Seventh Street and Campus Road, Line 91 proceeds north via Bellflower Boulevard to its final destination at Harvard Street. Days of operation are Monday through Sunday, including major holidays. The AM peak period headway is one hour, and the PM peak period ranges between 24 minutes and one hour. Weekend headway for the mid-day peak period is 30 minutes.
- Long Beach Transit Line 92 (Downtown Long Beach to the City of Bellflower). Long Beach Transit Line 92 runs east to west and north to south through the City. Line 92 starts at the Long Beach Transit Mall and travels east to Campus Road via Seventh Street. At Seventh Street and Campus Road, Line 92 travels north via Bellflower Boulevard and Woodruff Avenue to its final destination at Alondra Boulevard. Days of operation are Monday through Friday only. No service is provided Saturday, Sunday, or major holidays. The AM and PM peak period headway ranges between 24 to 36 minutes.
- Long Beach Transit Line 93 (Downtown Long Beach to the City of Bellflower). Long Beach Transit Line 93 runs east to west and north to south through the City. Line 93 starts at the Long Beach Transit Mall and travels east to Campus Road via Seventh Street. At Seventh Street and Campus Road, Line 93 travels north via Bellflower Boulevard, Clark Avenue, and Lakewood Boulevard to its final destination at Bellflower Boulevard and Harvard Street. Days of operation are Monday through Friday only. No service is provided Saturday, Sunday, or major holidays. The AM and PM peak period headway is one hour.
- Long Beach Transit Line 94 (Downtown Long Beach to Los Altos). Long Beach Transit Line 94 runs east to west and north to south through the City. Line 94 starts at the Long Beach Transit Mall and travels east to Campus Road via Seventh Street. At Seventh Street and Campus Road, Line 94 travels north via Bellflower Boulevard to its final destination at Stearns Street. Days of operation are Monday through Sunday, including major holidays. The AM and PM peak period headway is one hour. Weekend headway for the mid-day peak period is 30 minutes.
- Long Beach Transit 96 ZAP (Downtown to Long Beach to Los Altos). The Long Beach Transit 96 ZAP is a limited stop service that starts at the Long Beach Transit Mall and runs east to west along Seventh Street. At Seventh Street and Campus Road, the 96 ZAP proceeds north via Campus Road and Bellflower

Boulevard to its final destination at the Los Altos Market Center. Days of operation are Monday through Friday only. No service is provided on Saturday, Sunday, or major holidays. The AM and PM peak period headway is 10 minutes.

- Long Beach Transit Line 111 (Downtown Long Beach to Lakewood Center Mall). Long Beach Transit Line 111 predominantly runs north to south through the City. Line 111 starts at the Long Beach Transit Mall and runs east to west along Broadway. At Broadway and Ximeno Avenue, Line 111 proceeds north to its final destination at South Street and Downey Avenue via Ximeno Avenue, Clark Avenue, and Lakewood Boulevard. Days of operation are Monday through Sunday, including major holidays. The AM and PM peak period headway is 30 minutes. Weekend headway for the mid-day peak period is one hour and 10 minutes.
- Long Beach Transit Line 112 (Downtown Long Beach to Lake Center Mall). Long Beach Transit Line 112 runs predominantly north to south through the City, starting at the Long Beach transit Mall and traveling east to Ximeno Avenue via Broadway. At Ximeno Avenue, Line 112 travels north via Ximeno Avenue, Clark Avenue, and Lakewood Boulevard to its final destination at Downey Avenue and South Street. Days of operation are Monday through Sunday, including major holidays. The AM and PM peak hour headway is 30 minutes. Weekend headway for the mid-day peak is one hour and 10 minutes.
- Long Beach Transit Line 131 (Wardlow Station to Seal Beach). Long Beach Transit Line 131 runs both east to west and north to south through the City. Line 131 starts at the Wardlow Blue Line Station in Long Beach and travels east to Redondo Avenue via Wardlow Road and Spring Street. At Redondo Avenue, Line 131 travels south to Ocean Boulevard, then east via Ocean Boulevard, Livingston Drive, Second Street, and PCH to its final destination at Main Street and Electric Avenue. Days of operation are Monday through Sunday, including major holidays. The AM and PM peak period headway is 30 minutes. Weekend headway for the mid-day peak period is 35 minutes.
- Long Beach Transit Line 171 (Santa Fe at PCH to Seal Beach). Long Beach Transit Line 171 runs east to west through the City starting at Technology Place. From technology Place, Line 171 travels east via Atherton Street and PCH to its final destination at Electric Avenue and Main Street. Days of operation are Monday through Friday only. No service is provided Saturday, Sunday, or major holidays. The AM and PM peak period headway is 30 minutes.
- Long Beach Transit Line 173 (Downtown Long Beach to Norwalk Station). Long Beach Transit Line 171 runs both east to west and north to south through the City. Line 173 starts at the Long Beach Transit Mall and travels east along PCH and Atherton Street. At Atherton Street and Studebaker Road, Line 173 proceeds north via Studebaker Road and Norwalk Boulevard to its final destination at the Norwalk Green Line Station. Days of operation are Monday through Sunday, including holidays. The AM and PM peak period headway is 30 minutes. Weekend headway for the mid-day peak period is 40 minutes.
- Long Beach Transit Line 181 (Wardlow Blue Line Station to Colorado Lagoon). Long Beach Transit Line 181 runs both east to west and north to south through the City. Line 181 starts at the Wardlow Blue Line Station and travels south along Magnolia Avenue. From Magnolia Avenue, Line 181 proceeds east via Broadway, First Street, and Fourth Street to its final destination at Fourth Street

and Ximeno Avenue. Days of operation are Monday through Sunday, including major holidays. The AM and PM peak period headway is 30 minutes. Weekend headway for the mid-day peak period is 40 minutes.

- Long Beach Transit Line 182 (Wardlow Blue Line Station to Colorado Lagoon). Long Beach Transit Line 182 runs both east to west and north to south through the City. Line 182 starts at the Wardlow Blue Line Station and travels south to First Street via Pacific Place and Pacific Avenue. At First Street, Line 182 travels east to Long Beach Boulevard then north to Fourth Street. At Fourth Street and Long Beach Boulevard, Line 182 proceeds east to its final destination at Fourth Street and Ximeno Avenue. Days of operation are Monday through Sunday, including major holidays. The AM and PM peak hour headway is 30 minutes. Weekend headway for the mid-day peak period is 40 minutes.
- OCTA Route 1 (Long Beach to San Clemente via PCH). OCTA Route 1 travels north to south, starting in San Clemente and ending in Long Beach. From San Clemente, Route 1 travels north to west along El Camino Real, Avenida Vaquero, Camino, Del Prado, and PCH to its final destination at Seventh Street and Channel Drive. Days of operation are Monday through Sunday, including major holidays. The AM peak period headway ranges between one hour and one hour and 24 minutes. The PM peak period ranges between 46 minutes and one hour and 12 minutes. Weekend headway for the mid-day peak period is approximately one hour.
- OCTA Route 42/42A (Seal Beach to Orange via Seal Beach Boulevard/Los Alamitos Boulevard/Lincoln Avenue). OCTA Route 42/42A starts in Seal Beach at Balboa Drive and PCH and travels north along Seal Beach Boulevard and Los Alamitos. At Carson Street, Route 42/42A proceeds east via Lincoln Avenue to its final destination at The Village at Orange. Days of operation are Monday through Sunday, including major holidays. The AM peak period headway ranges between 30 to 40 minutes, and the PM peak period headway ranges between 30 minutes and one hour. The Saturday and Sunday mid-day peak period headway is 40 minutes and 30 minutes to one hour, respectively.
- OCTA Route 50 (Long Beach to Orange via Katella Avenue). OCTA Route 50 starts at Channel Drive and Seventh Street in Long Beach and travels north along Studebaker Road. At Willow Street, Route 50 proceeds east until Willow Street turns into Katella Avenue, then north on Tustin Street to its final destination at The Village at Orange. Days of operation are Monday through Sunday, including major holidays. The AM and PM peak period headway ranges between 20 to 30 minutes. Saturday and Sunday mid-day peak period headway is 30 minutes and 45 minutes, respectively.
- OCTA Route 60 (Long Beach to Tustin via Seventh Street/Westminster Avenue/17th Street). OCTA Route 60 runs east to west, starting from the Transit Mall Shelter in Long Beach. From the Transit Mall Shelter, Route 60 travels north along Pacific and east along Seventh Street, Westminster Avenue, and 17th Street. At 17th Street and Newport Avenue, Route 60 proceeds south to its final destination at Larwin Square in Tustin. Days of operation are Monday through Sunday, including major holidays. The AM peak period headway is approximately 24 minutes, and the PM peak period headway ranges from 25 to 42 minutes. Saturday and Sunday mid-day peak period headway is 30 minutes.

- OCTA Route 164 (Seal Beach to Westminster via Seal Beach Boulevard/Lampson Avenue/Edwards Street). OCTA Route 164 begins at Leisure World in Seal Beach and travels north to Lampson Avenue via Seal Beach Boulevard. From Seal Beach Boulevard and Lampson Avenue, Route 164 travels east to Western and proceeds south via Western and Edwards Street to its final destination at the Westminster Mall area. Days of operation are Monday through Friday. No service is provided Saturday, Sunday, or major holidays. The AM peak period headway is one hour and 10 minutes. The PM peak period headway is also one hour and 10 minutes with the last eastbound bus running at 5:20 PM and the last westbound bus at 6 PM.

3L.2 Regulatory Background

State

California Water Code

The proposed project is subject to the State of California Water Code, Division 12, Part 5, Chapter 1, Article 4, Section 31060 titled *Construction Rights of Way*.² Any mitigation measure required to be implemented in a state right-of-way would require a Caltrans Encroachment Permit. Mitigation in excess of \$300,000 would require a Caltrans Project Study Report. Caltrans recommended that large-sized trucks transporting construction materials and equipment be limited to off-peak commute periods and any heavy construction equipment that requires the use of oversized transport vehicles on state roadways or facilities would require a Caltrans transportation permit. The construction scenario defined for the proposed project would not require the transport of oversized vehicles on state facilities.

Regional

SCAG Regional Transportation Plan

The proposed project lies within the jurisdiction of the SCAG Regional Transportation Plan (RTP), which is a long-range plan that provides a blue print for future transportation improvements and investments based on specific transportation goals, objectives, policies, and strategies. The RTP is based in federal transportation law requiring comprehensive, cooperative, and continuous transportation planning. SCAG meets these requirements by developing comprehensive transportation plans that include all surface transportation modes (multi-modal) planning to ensure efficient movement of people and goods throughout the region. The RTP includes an assessment of overall growth and economic trends in the region and provides strategic direction for transportation capital investments. The RTP serves the following functions:

- Addresses how to improve mobility and solve congestion problems;

² West's Annotated California Codes. 1984. *Water Codes Sections 30000 to 38999. Official California Water Code Classification*. Vol. 69. St. Paul, MN: West Publishing Company.

- Evaluates federal, state, and local funding available for transportation improvements;
- Estimates costs of projects and develops funding strategies to meet these costs; and
- Achieves mobile air quality requirements.

Local

Metropolitan Transportation Authority Congestion Management Plan

The CMP for the County of Los Angeles is a state-mandated program that was enacted by state legislature with the passage of Proposition 111 in 1990. The program is intended to address the impact of local growth on the regional transportation system. As required by the 2002 CMP for the County, a Traffic Impact Assessment (TIA) has been prepared for the proposed project to determine the potential impacts to designated monitoring locations in the CMP highway system.³

General Plan

The transportation element of the City of Long Beach General Plan includes pertinent policies related to traffic, transportation and circulation; issues related to land use; and various traffic analyses of traffic conditions within the City.

3L.3 Environmental Impacts and Mitigation Measures

Methodology

Consistent with the City of Long Beach guidelines for traffic impact analyses, traffic conditions in the vicinity of the proposed project area were analyzed using the ICU method. The ICU methodology compares the level of traffic during the peak hours at an intersection to the amount of traffic that intersection is able to carry (capacity). Intersections with vehicular volumes that are at or near capacity (V/C 1.000) experience greater congestion and longer vehicle delays.

The City of Long Beach requirements state that the ICU calculations use a lane capacity of 1,600 vph for left turn, through, and right turn lanes; and dual left turn lanes have a capacity of 2,880 vph. An adjustment for clearance intervals are based in the number of phases in the intersection and whether the left turn movements are permitted or protected. The clearance intervals range from 0.10 to 0.18 seconds between signal phases during which an intersection is not used by any traffic.

Per City of Seal Beach requirements, the signalized intersections were also analyzed using the ICU methodology, but with a lane capacity of 1,700 vph for left-turn, through

³ Meyer, Mohaddes Associates, *Seaport Marina Project Traffic Impact Report*, 2006.

and right-turn lanes, and a dual left-turn capacity of 3,400 vph. A clearance adjustment factor of 0.05 was added to each level of service calculation.

Significance Criteria

The criteria used to determine the significance of an impact are based on the Initial Study Checklist in Appendix G of the *CEQA Guidelines*. Some criteria regarding transportation related impacts were eliminated from further consideration because the proposed project: (1) would be consistent with height restrictions and would not change air traffic patterns; (2) would not result insignificant changes to existing roadway alignments; (3) would comply with applicable regulations and standards with regard to emergency access; and (4) would comply with all state and federal requirements relating to public transportation. These issues therefore will not be discussed here. Please refer to the Initial Study (Appendix A) for further clarification.

For this analysis, the proposed project may result in significant impacts if it would:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system;
- Exceed a level of service standard established by the County CMP agency for designated roads or highways;
- For intersections in the City of Long Beach, result in LOS E or F and project related traffic contributes a V/C increase of 0.020 or more to the critical movements;
- For intersections in the City of Seal Beach, increase demand at a study intersection by a V/C of 0.010 or greater at a signalized location that currently, or in the future, operates at LOS E or F;
- Substantially increase hazards due to a design feature or incompatible uses; or
- Result in inadequate parking capacity

Project Impacts

Impact 3L.1: Could the proposed project cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system?

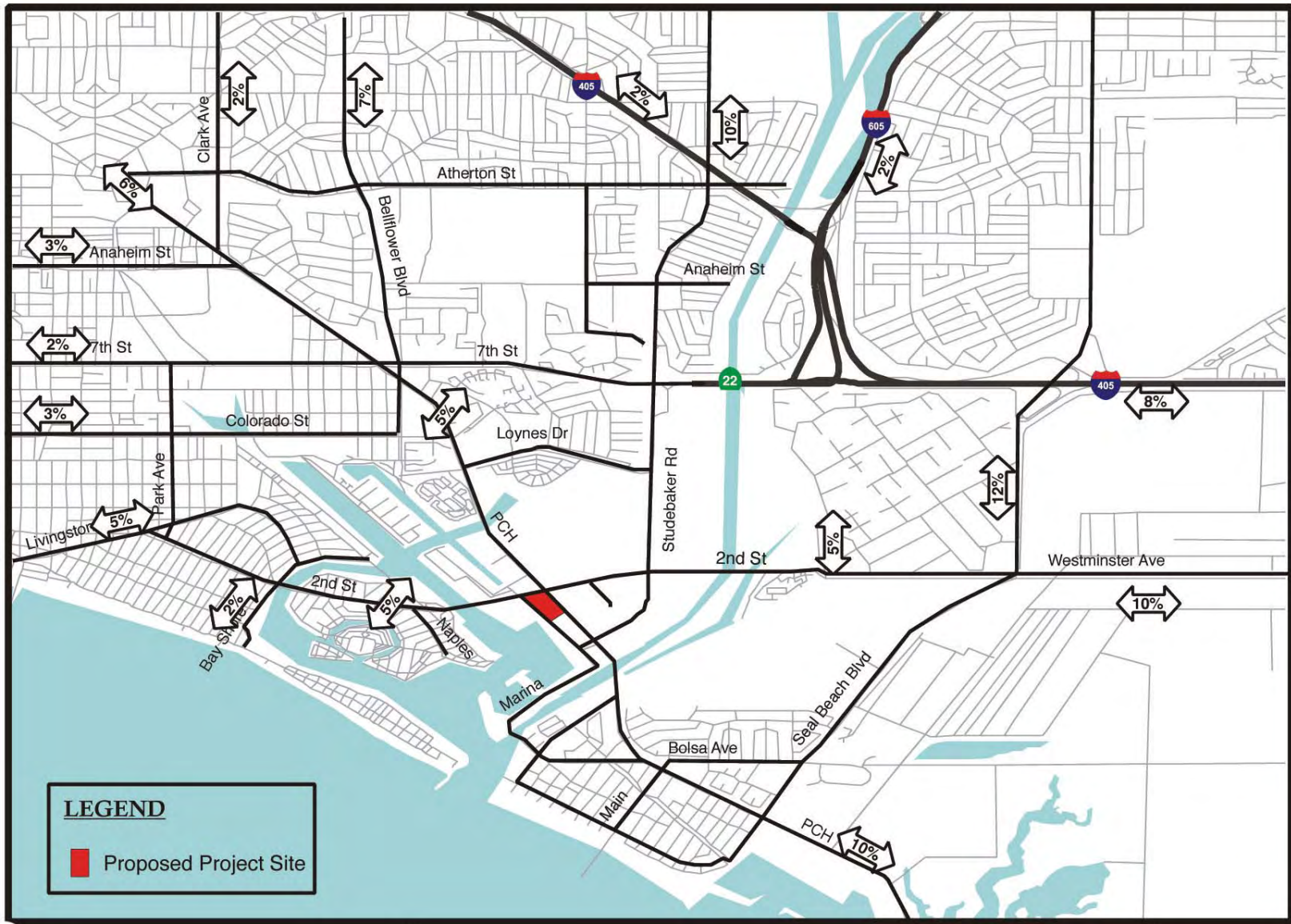
The proposed project would cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system. To evaluate the potential impact of the proposed project on local traffic conditions, it is first necessary to develop a forecast of future traffic volumes in the study area under conditions without the proposed project. This would provide a basis against which to measure the proposed project's incremental traffic impacts compared to cumulative conditions without the project.

The projection of Year 2009 (projected build-out year of the proposed project) No-Project traffic consists of existing traffic plus ambient traffic growth and traffic generated by the related projects, all of which were assumed to be completed by the Year 2009. Based on Year 2009 No-Build traffic forecasts, 11 study intersections are projected to operate at LOS E or LOS F in 2009. These intersections are:

- Atherton Street/Bellflower Boulevard (AM and PM peak hours)
- Seventh Street/Park Avenue (AM and PM peak hours)
- Seventh Street/PCH (AM and PM, peak periods)
- Seventh Street/Bellflower Blvd (AM and PM peak hours)
- SR-22 westbound on-ramp/Studebaker Road (PM peak hour)
- Loynes Drive/PCH (PM and Saturday peak periods)
- Second Street/Bay Shore Avenue (PM peak hour)
- Second Street/PCH (AM, PM and Saturday peak hours)
- Second Street/Studebaker Rd (AM peak hour)
- Studebaker Road/PCH (AM, PM and Saturday peak hours)
- PCH/Seal Beach Boulevard (AM peak hour)

The proposed project is expected to generate 354 net trips in the AM peak hour, 726 net trips in the PM peak hour, and 885 net trips in the weekend peak hour. Project trip distribution is shown in **Figures 3L.2 and 3L.3**.

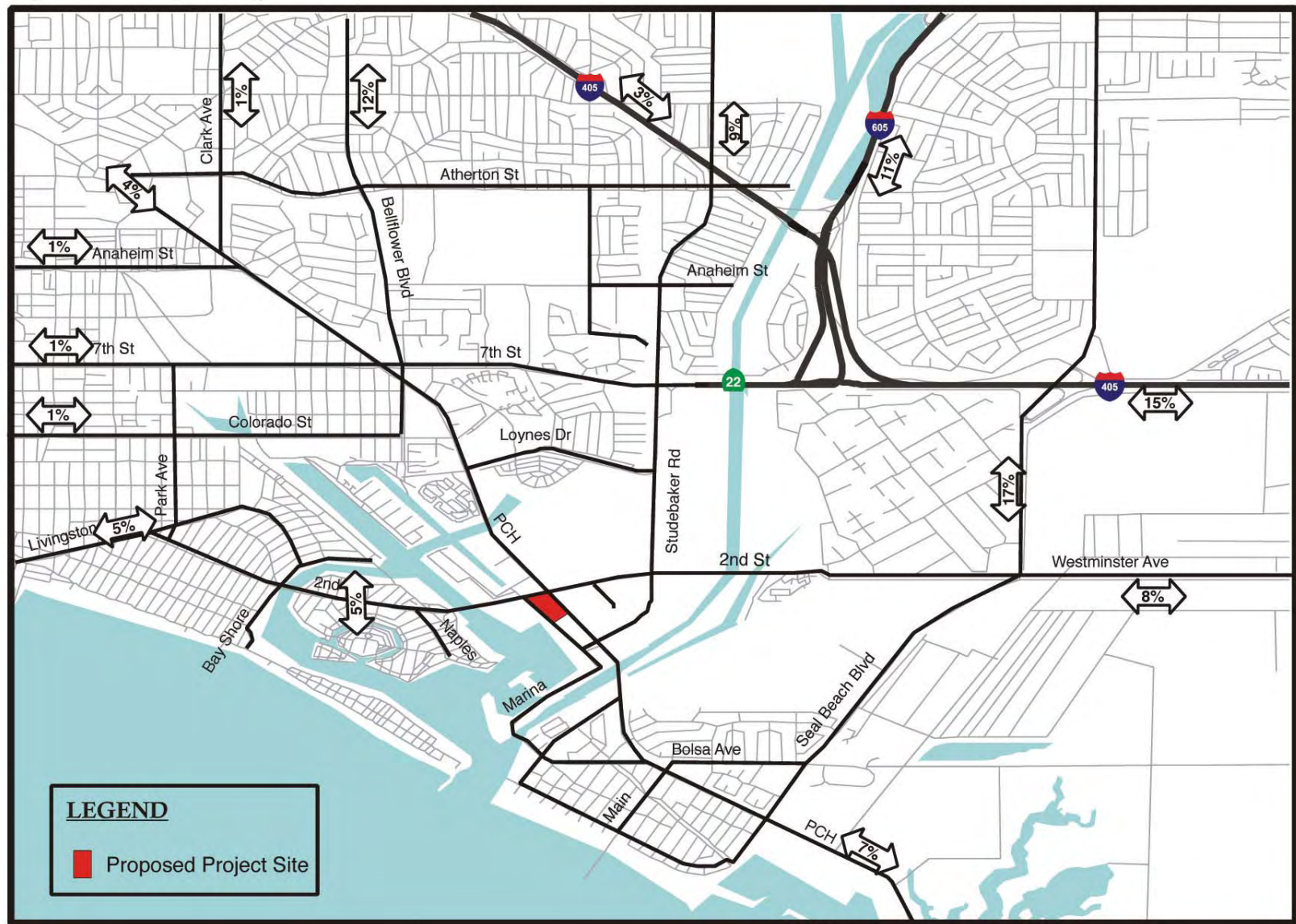
The proposed project driveways are located on PCH and Marina Drive. There are two entrances proposed along PCH; they are referred to as the south entrance, which is the main entrance and will provide access to both northbound and southbound PCH and the north entrance, which is located just south of the PCH and Second Street intersection and will be limited to right turns in and right turns out only. The south (main) entrance on PCH may be signalized, but does not currently have approval from Caltrans for signalization. Therefore, two scenarios were analyzed to evaluate traffic impacts caused by the proposed project. Under the scenario with the signal, the traffic exiting the Marina Shores shopping area on the east side of the PCH was also assumed to use the new signal. The proposed signal, which would provide easier access to PCH, would change the number of trips entering and exiting at this location by attracting more of the proposed project traffic, and also affects the traffic at other nearby intersections. This entrance was assumed to have one inbound lane and two outbound lanes. The north entrance was assumed to have one inbound lane and one outbound lane.



SOURCE: Meyer, Mohaddes Associates, 2006.

Long Beach Marina EIR . 204452

Figure 3L.2
AM Peak Hour Trip Distribution



SOURCE: Meyer, Mohaddes Associates, 2006.

Long Beach Marina EIR . 204452

Figure 3L.3
PM and Weekend Peak Hour Trip Distribution

An alternate access point from PCH was also analyzed. This entrance, located approximately 150 feet north of the south (main) entrance is designed as a right-in, right-out driveway. This means that only right turns may be made at the driveway, southbound vehicles on PCH may turn right into the project, and proposed project traffic exiting the site may only turn right when leaving the proposed project. The proposed project has been analyzed both with and without this alternate right-in, right-out driveway. The alternate right-in, right-out driveway is assumed to have one inbound lane and one outbound lane.

For the 2009 with-project traffic operations with no signal at south PCH access assumed, seven study intersections are projected to have significant project impacts. As shown in **Table 3L.4**, these intersections are:

- Seventh Street/PCH (PM peak period)
- SR-22 westbound on-ramp/Studebaker Road (PM peak period)
- Loynes Drive/PCH (PM and Saturday peak periods)
- Second Street/Marina Drive (PM and Saturday peak periods)
- Second Street/PCH (AM, PM, and Saturday peak periods)
- Second Street/Studebaker Road (AM and PM peak periods)
- Studebaker Road/PCH (PM and Saturday peak periods)

In the analysis without a signal, most of the traffic exiting the project site that access the area north and east of the PCH/Second Street intersection, would not use the PCH access to exit due to high through volumes on PCH that would impede an eastbound left turn maneuver. Rather, traffic would tend to exit the project site via the Second Street/Marina Drive intersection, and then access the areas north and east of the project site. The number of eastbound throughs and left turns in the no-signal analysis is higher than the with signal analysis at the intersection of PCH/Second Street.

However, for the 2009 With-Project Traffic Operations with signal at PCH access assumed, the proposed project traffic through the Second Street and Marina Drive intersection will decrease and the orientation of proposed project traffic at Second Street and PCH will change. The turning movement volumes will be different at four study intersections while all remaining intersections will not change. The intersections that have volume changes due to the addition of a signal at the main proposed project access on PCH are shown in **Table 3L.5** and are as follows:

- Second Street/East Marina Drive (decreased volume)
- Second Street/PCH (changes in turning movement volumes)
- Studebaker Road/East Marina Drive (changes in turning movement volumes)
- Studebaker Road/PCH (changes in turning movement volumes)

TABLE 3L.4
PEAK HOUR LOS COMPARISON – (SOUTH PCH DRIVEWAY NOT SIGNALIZED)

| Study Intersection | Year 2009 AM | | | | | Year 2009 PM | | | | | Year 2009 Saturday | | | | |
|---|--------------|--------------|--------------|--------------|-------|--------------|--------------|--------------|--------------|--------------|--------------------|--------------|--------------|--------------|--------------|
| | No Project | | With Project | | Diff | No Project | | With Project | | Diff | No Project | | With Project | | Diff |
| | LOS | V/C or Delay | LOS | V/C or Delay | | LOS | V/C or Delay | LOS | V/C or Delay | | LOS | V/C or Delay | LOS | V/C or Delay | |
| PCH/Clark Avenue | C | 0.763 | C | 0.768 | 0.005 | D | 0.818 | D | 0.831 | 0.013 | A | 0.559 | A | 0.574 | 0.015 |
| Anaheim Street/PCH | A | 0.599 | B | 0.607 | 0.008 | C | 0.763 | C | 0.775 | 0.012 | D | 0.869 | D | 0.894 | 0.025 |
| Atherton Street/ Bellflower Boulevard | E | 0.976 | E | 0.976 | 0.000 | E | 0.923 | E | 0.926 | 0.003 | B | 0.678 | B | 0.682 | 0.004 |
| Seventh Street/Park Avenue | F | 1.076 | F | 1.078 | 0.002 | F | 1.029 | F | 1.034 | 0.005 | C | 0.711 | C | 0.717 | 0.006 |
| Seventh Street/PCH | F | 1.085 | F | 1.091 | 0.006 | F | 1.159 | F | 1.179 | 0.020 | D | 0.889 | E | 0.906 | 0.017 |
| Seventh Street/Bellflower Boulevard | F | 1.038 | F | 1.038 | 0.000 | E | 0.967 | E | 0.973 | 0.006 | D | 0.819 | D | 0.830 | 0.011 |
| PCH/Bellflower Boulevard | C | 0.766 | C | 0.769 | 0.003 | D | 0.871 | D | 0.895 | 0.024 | C | 0.753 | C | 0.765 | 0.012 |
| Anaheim Street/ Studebaker Road | D | 0.840 | D | 0.845 | 0.005 | C | 0.783 | C | 0.792 | 0.009 | A | 0.583 | A | 0.594 | 0.011 |
| SR-22 westbound on-ramp/ Studebaker Road | D | 0.815 | D | 0.830 | 0.015 | E | 0.921 | E | 0.946 | 0.025 | C | 0.799 | D | 0.830 | 0.031 |
| SR-22 eastbound on-ramp/ Studebaker Road | C | 0.743 | C | 0.758 | 0.015 | D | 0.803 | D | 0.828 | 0.025 | C | 0.762 | C | 0.793 | 0.031 |
| Loynes Drive/ Studebaker Road | B | 0.699 | C | 0.709 | 0.010 | D | 0.841 | D | 0.857 | 0.016 | C | 0.784 | D | 0.802 | 0.018 |
| Loynes Drive/PCH | D | 0.895 | E | 0.914 | 0.019 | F | 1.033 | F | 1.083 | 0.050 | E | 0.997 | F | 1.062 | 0.065 |
| Second Street/ Livingston Drive | C | 0.718 | C | 0.729 | 0.011 | B | 0.666 | B | 0.685 | 0.019 | B | 0.648 | B | 0.671 | 0.023 |
| Second Street/Bay Shore Avenue | D | 0.853 | D | 0.866 | 0.013 | E | 0.989 | F | 1.007 | 0.018 | B | 0.666 | B | 0.695 | 0.029 |

TABLE 3L.4
PEAK HOUR LOS COMPARISON – (SOUTH PCH DRIVEWAY NOT SIGNALIZED) (CONT.)

| Study Intersection | Year 2009 AM | | | | | Year 2009 PM | | | | | Year 2009 Saturday | | | | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------------|--------------|--------------|--------------|--------------|
| | No Project | | With Project | | Diff | No Project | | With Project | | Diff | No Project | | With Project | | Diff |
| | LOS | V/C or Delay | LOS | V/C or Delay | | LOS | V/C or Delay | LOS | V/C or Delay | | LOS | V/C or Delay | LOS | V/C or Delay | |
| Second Street/ Naples Drive | B | 0.638 | B | 0.652 | 0.014 | D | 0.824 | D | 0.850 | 0.026 | B | 0.674 | C | 0.705 | 0.031 |
| Second Street/East Marina Drive | C | 0.738 | C | 0.759 | 0.021 | D | 0.889 | E | 0.927 | 0.038 | D | 0.853 | E | 0.970 | 0.117 |
| Second Street/PCH | E | 0.960 | E | 1.00 | 0.040 | F | 1.086 | F | 1.131 | 0.045 | F | 1.001 | F | 1.053 | 0.052 |
| Second Street/ Shopkeeper Road | C | 0.701 | C | 0.718 | 0.017 | D | 0.848 | D | 0.868 | 0.020 | D | 0.820 | D | 0.844 | 0.024 |
| Second Street/ Studebaker Road | E | 0.934 | E | 0.956 | 0.022 | D | 0.874 | E | 0.902 | 0.028 | D | 0.811 | D | 0.844 | 0.033 |
| Second Street/ Westminster/Seal Beach Boulevard | C | 0.783 | C | 0.787 | 0.004 | D | 0.863 | D | 0.869 | 0.006 | B | 0.664 | B | 0.680 | 0.016 |
| Studebaker Road/Marina Drive (1) | B | 11.6 | B | 11.7 | 0.1 | B | 13.7 | B | 14.2 | 0.5 | V | 16.5 | C | 17.3 | 0.8 |
| Studebaker Road/PCH | E | 0.927 | E | 0.938 | 0.011 | F | 1.193 | F | 1.220 | 0.027 | F | 1.043 | F | 1.081 | 0.038 |
| Marina Drive/PCH (1) | A | 1.4 | A | 1.4 | 0.0 | A | 2.4 | A | 2.5 | 0.1 | A | 2.9 | A | 3.0 | 0.1 |
| PCH/Bolsa/Main | C | 0.777 | C | 0.779 | 0.002 | D | 0.801 | D | 0.807 | 0.006 | C | 0.775 | C | 0.782 | 0.007 |
| PCH/Seal Beach Boulevard | E | 0.908 | E | 0.909 | 0.001 | D | 0.816 | D | 0.820 | 0.004 | C | 0.789 | C | 0.793 | 0.004 |

Note:

Bold "diff" column indicates significantly impacted location.

(1) denotes unsignalized intersection, overall intersection level of service is shown.

SOURCE: Meyer, Mohaddes Associates, *Seaport Marina Project Traffic Impact Report*, 2006.

TABLE 3L.5
PEAK HOUR LOS COMPARISON – (ASSUMES SOUTH PCH DRIVEWAY WITH TRAFFIC SIGNAL)

| Study Intersection | Year 2009 AM | | | | | Year 2009 PM | | | | | Year 2009 Saturday | | | | |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|--------------------|--------------|--------------|--------------|--------------|
| | No Project | | With Project | | | No Project | | With Project | | | No Project | | With Project | | |
| | LOS | V/C or Delay | LOS | V/C or Delay | Diff | LOS | V/C or Delay | LOS | V/C or Delay | Diff | LOS | V/C or Delay | LOS | V/C or Delay | Diff |
| Second Street/East Marina Drive | C | 0.738 | C | 0.759 | 0.021 | D | 0.889 | E | 0.927 | 0.038 | D | 0.853 | E | 0.970 | 0.117 |
| Second Street/PCH | E | 0.960 | F | 1.020 | 0.060 | F | 1.086 | F | 1.099 | 0.013 | F | 1.001 | F | 1.034 | 0.033 |
| Studebaker Road/Marina Drive (1) | B | 11.6 | B | 11.6 | 0.0 | B | 13.7 | B | 13.9 | 0.2 | C | 16.5 | C | 16.8 | 0.3 |
| Studebaker Road/PCH | E | 0.901 | E | 0.907 | 0.006 | F | 1.017 | F | 1.027 | 0.010 | D | 0.897 | E | 0.914 | 0.017 |

Note:

Bold "diff" column indicates significantly impacted location.

(1) denotes unsignalized intersection, overall intersection level of service is shown.

SOURCE: Meyer, Mohaddes Associates, *Seaport Marina Project Traffic Impact Report*, 2006.

The LOS analysis results demonstrate that the same seven study intersections would have significant impacts even with a signal at the PCH access; however, if the signal is in place at the PCH proposed project access area, there will not be a significant impact at the Second Street and PCH intersection during the PM peak hour, nor at the Studebaker Road and PCH in the PM peak hour. The seven intersections that would be significantly impacted by the project assuming a signal at the PCH access is present, are:

- Seventh Street/PCH (PM and Saturday peak periods)
- SR-22 westbound on-ramp/Studebaker Road (PM peak period)
- Loynes Drive/PCH (PM peak period)
- Second Street/Marina Drive (PM and Saturday peak periods)
- Second Street/PCH (AM and Saturday peak periods)
- Second Street/Studebaker Rd (AM and PM peak periods)
- Studebaker Road/PCH (Saturday peak period)

Some of these intersections are physically constrained with existing developments located close to the street or other limitations making expansion of the roadway cross-section impractical. At these locations, operational improvements may improve overall traffic conditions, but will not affect the volume-to-capacity calculation on which the impact criteria are based. At these locations, a significant unavoidable impact may remain. The proposed signal scenario would provide easier access to PCH.

The proposed project also considered a secondary right-in, right-out access on PCH, located approximately 150 feet north of the main access, described above. The previous analyses considered this alternate right-in, right-out access to be in place. Separate analyses were conducted in order to determine the changes if this access point was removed. The traffic volumes that would use this alternate access would shift to the two other driveway accesses on PCH. Since the secondary driveway is right-in, right-out only, the current right turns into the driveway would enter at the other main access driveways. The vehicles that would exit the project via the secondary driveway must turn right. If this access were removed, these vehicles would exit the other access driveways along PCH.

Thus, four access scenarios for the PCH access points were assessed (See **Table 3L.6**). They are:

- South (main) project access is unsignalized; alternate right-in, right-out access is in place.
- South (main) project access is signalized; alternate right-in, right-out access is in place.

**TABLE 3L.6
PROJECT ACCESS ALONG PCH PEAK HOUR LOS COMPARISON**

| Access Scenario | | Year 2009 AM | | Year 2009 PM | | Year 2009 Saturday | |
|--|---|-----------------|-----------------|-----------------|-----------------|-----------------------|-----------------|
| South (Main) Project Driveway on PCH | Alternate Right- in, Right-out Driveway | LOS | V/C or Delay | LOS | V/C or Delay | LOS | V/C or Delay |
| Unsignalized | In Place | | | | | | |
| | South Drwy | F | 230.3 | F | OVRFL | F | OVRFL |
| | North Drwy | B | 13.8 | B | 13.7 | C | 15.7 |
| | Alternate | B | 13.6 | B | 13.4 | C | 13.2 |
| Signalized | In Place | | | | | | |
| | South Drwy | C | 0.703 | E | 0.909 | E | 0.932 |
| | North Drwy | B | 13.8 | B | 13.7 | C | 13.7 |
| | Alternate | B | 13.6 | B | 13.4 | C | 15.2 |
| Unsignalized | None | | | | | | |
| | South Drwy | F | 230.3 | F | OVRFL | F | OVRFL |
| | North Drwy | B | 14.0 | B | 14.2 | C | 16.4 |
| | Alternate | N/A | N/A | N/A | N/A | N/A | N/A |
| Signalized | None | | | | | | |
| | South Drwy | C | 0.703 | E | 0.909 | E | 0.932 |
| | North Drwy | B | 14.0 | B | 14.2 | C | 16.4 |
| | Alternate | N/A | N/A | N/A | N/A | N/A | N/A |

SOURCE: Meyer, Mohaddes Associates, *Seaport Marina Project Traffic Impact Report*, 2006.

- South (main) project access is unsignalized; alternate right-in, right-out access does not exist.
- South (main) project access is signalized; alternate right-in, right-out access does not exist.

As shown in Table 3L.6, best overall operating conditions would be provided with the main proposed project driveway on PCH signalized with or without the alternate right-in, right-out driveway. Without a traffic signal, the LOS would be F, resulting in delays to turning vehicles and also resulting in further diversion to Second Street as well as Studebaker Road. At the south (main) access project driveway along PCH in signalized conditions, the level of service calculations show that with two exiting lanes (as shown on current plans), the intersection will operate at LOS E in the PM and Saturday peak hours. If three exiting lanes were provided, the intersection would operate at a LOS D or better. The LOS calculations also show that having the alternate right-in, right-out access driveway has little effect on the LOS at other project driveways. The shift in volumes does not change the critical movements within the intersection.

To address the proposed project's significant impacts, the following measures are proposed. Once the following measures are implemented, these mitigation measures would improve the traffic flow and safety in the project area.

Mitigation Measures

Mitigation included as part of other projects is as follows:

As part of the Boeing Seal Beach project, a change to the existing street system within the study area has been committed as part of that project approval. This improvement will add a westbound right-turn lane at the Second Street/Studebaker Road intersection. This improvement will allow westbound vehicles who wish to go north on Studebaker Road a separate turn lane and remove these vehicles from the through lanes, thus increasing capacity in the intersection. This change has been included in the with- and without-project scenarios. This mitigation is proposed as part of the Boeing Seal Beach project and assumed in this study, because the City believes this project and its mitigations will move forward. A significant cumulative impact would occur if this improvement were not made.

Project mitigation measures would include:

Measure 3L.1: At Second Street/Marina Avenue, the project shall restripe the northbound approach to provide two left, one through and one right turn lane; restripe the southbound approach to provide one left, one through and one right turn lane; and upgrade the traffic signal to provide protected left turns and overlap phases. This improvement will fully mitigate this project's impacts at this location.

Measure 3L.2: The project shall construct a shared northbound right turn-through lane on Loynes Drive/PCH, along with the installation of new curb and gutter. The turn lane length would be approximately 150 feet. This improvement combined with the new traffic signal at the PCH main driveway would fully mitigate this project's impacts at this location.

Measure 3L.3: A new four-lane roadway connecting Studebaker Road to Shopkeeper Road around the Marketplace shopping center shall be constructed as project mitigation. This roadway will provide a "bypass" route for some traffic to avoid the congested Second Street/PCH intersection. It will divert some northbound right turns and westbound left turns away from the Second Street/PCH intersection. The proposed new roadway shall include the following improvements:

- It will be a new four-lane public roadway connection between the intersection of Studebaker Road/PCH and Second Street/Shopkeeper Road behind the Market Place shopping center. The applicant will be responsible for acquiring the necessary right-of-way and the applicant will be responsible for the design and construction of the new roadway facility. The applicant will secure necessary approvals from other county, state and federal agencies with jurisdiction over such projects to the satisfaction of the Director of Planning and Building.

- At the intersection of PCH/Studebaker, the roadway will have three departure lanes and two receiving lanes. Specific lane configurations will be determined at the time of design.
- At the Second Street/Shopkeeper Road intersection, Second Street shall be modified to provide an additional westbound left turn lane (two total) and Shopkeeper Road shall be modified to provide an additional right turn lane (two total). Shopkeeper Road shall also be modified to provide two receiving lanes at the intersection. The traffic signal shall be upgraded to provide a northbound right turn overlap operation.

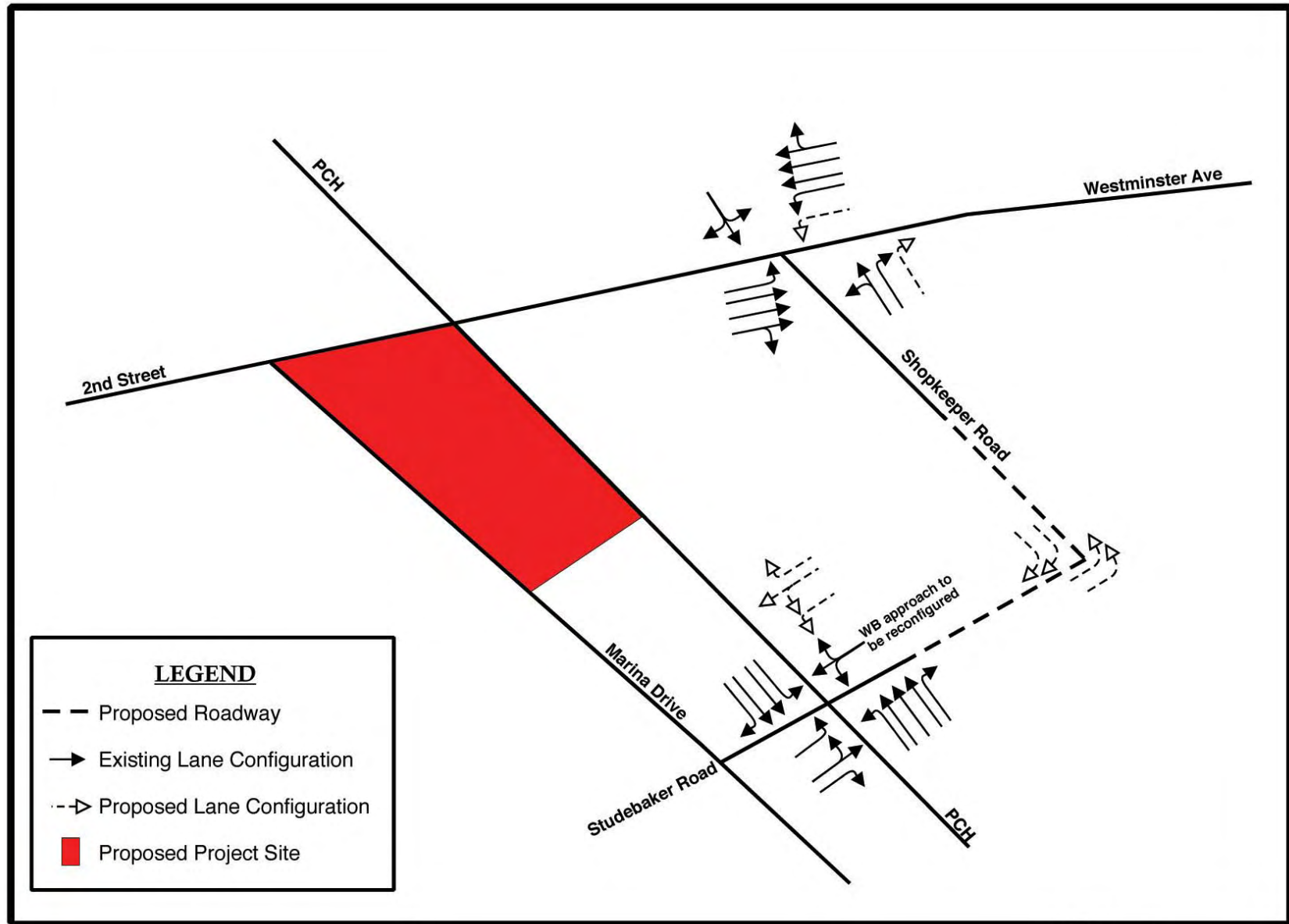
An analysis was made of the new four-lane connection roadway. Using the regional travel demand model, this proposed link was evaluated and the number of diverted trips was estimated. These trips were then analyzed in the with-project conditions, and assumed a signalized intersection at the south (main) project driveway. The model showed that due to the congestion that exists at Second Street and PCH, northbound right turns and westbound left turns at this intersection would tend to use the new connector road, since it has available capacity and is less congested. The analysis further showed that there would be improvement in the level of service at the Second Street and PCH intersection and the PCH at Studebaker Road intersection, thus fully mitigating project impacts at those intersections. **Figure 3L.4** shows the future four-lane connection roadway, and the proposed lane configurations at the Second Street and Shopkeeper Road intersection and the PCH and Studebaker Road intersection.

Significance After Mitigation: The 2009 level of service without the project, with the project, and with all proposed roadway improvements are shown in **Table 3L.7**. The project impact would be fully mitigated to a level of insignificance during each peak period at PCH/Loynes Drive, Second Street/PCH and at PCH/Studebaker Road. Significant project impacts will remain at the following intersections after the mitigation measures are implemented:

- Seventh Street/PCH
- SR-22 westbound on-ramp/Studebaker Road
- Second Street/Studebaker Road (if the Boeing project and associated mitigation do not proceed)

In addition, the following intersections will require a Statement of Overriding Considerations, because proposed mitigation and/or proposed improvements that affect the intersections will require additional agency approvals other than the City and therefore their implementation cannot be guaranteed:

- Loynes Drive/PCH (proposed mitigation requires Caltrans concurrence)
- Second Street/PCH (in the event Shopkeeper Road cannot be extended)
- Second Street/Marina Drive (proposed new signal on PCH requires Caltrans concurrence)



SOURCE: Meyer, Mohaddes Associates, 2006.

Long Beach Marina EIR . 204452
Figure 3L.4
 Four-Lane Connection Roadway

**TABLE 3L.7
PEAK HOUR LOS COMPARISON WITH MITIGATION**

| Year 2009 AM | | | | | | | | | |
|-------------------------------|-------------------|--------------|---------------------|--------------|-------|------------------------|--------------|--------|-------------------------------------|
| Study Intersection | Future No Project | | Future with Project | | Diff | Future with Mitigation | | Diff | Significant Project Impact (Yes/No) |
| | LOS | V/C or Delay | LOS | V/C or Delay | | LOS | V/C or Delay | | |
| PCH/Loynes Drive | D | 0.895 | E | 0.914 | 0.19 | C | 0.729 | -0.166 | No |
| Second Street/Marina Drive | C | 0.738 | C | 0.759 | 0.021 | C | 0.725 | -0.013 | No |
| Second Street/PCH | E | 0.960 | F | 1.020 | 0.060 | E | 0.949 | -0.011 | No |
| Second Street/Shopkeeper Road | C | 0.701 | C | 0.718 | 0.017 | B | 0.666 | -0.035 | No |
| Studebaker Road/PCH | E | 0.927 | E | 0.933 | 0.006 | D | 0.852 | -0.075 | No |
| Year 2009 PM | | | | | | | | | |
| Study Intersection | Future No Project | | Future with Project | | Diff | Future with Mitigation | | Diff | Significant Project Impact (Yes/No) |
| | LOS | V/C or Delay | LOS | V/C or Delay | | LOS | V/C or Delay | | |
| PCH/ Loynes Drive | F | 1.033 | F | 1.083 | 0.050 | E | 0.971 | -0.062 | No |
| Second Street/Marina Drive | D | 0.889 | E | 0.927 | 0.038 | D | 0.878 | -0.011 | No |
| Second Street/PCH | F | 1.086 | F | 1.099 | 0.013 | F | 1.093 | 0.007 | No |
| Second Street/Shopkeeper Road | D | 0.848 | D | 0.868 | 0.020 | C | 0.768 | -0.080 | No |
| Studebaker Road/PCH | F | 1.193 | F | 1.203 | 0.010 | F | 1.001 | -0.192 | No |
| Year 2009 Saturday | | | | | | | | | |
| Study Intersection | Future No Project | | Future with Project | | Diff | Future with Mitigation | | Diff | Significant Project Impact (Yes/No) |
| | LOS | V/C or Delay | LOS | V/C or Delay | | LOS | V/C or Delay | | |
| PCH/ Loynes Drive | E | 0.997 | F | 1.062 | 0.065 | D | 0.886 | -0.111 | No |
| Second Street/Marina Drive | D | 0.853 | E | 0.970 | 0.117 | D | 0.830 | -0.023 | No |
| Second Street/PCH | F | 1.001 | F | 1.034 | 0.033 | E | 0.989 | -0.012 | No |
| Second Street/Shopkeeper Road | D | 0.820 | D | 0.844 | 0.024 | C | 0.792 | -0.028 | No |
| Studebaker Road/PCH | F | 1.043 | F | 1.060 | 0.017 | D | 0.810 | -0.233 | No |

SOURCE: Meyer, Mohaddes Associates, *Seaport Marina Project Traffic Impact Report*, 2006.

Impact 3L.2: Could the proposed project exceed a LOS standard established by the County CMP agency for designated roads or highways?

The proposed project would not exceed a LOS for designated roads and highways. The CMP for Los Angeles County requires that the traffic impact of individual development projects of potential regional significance be analyzed. The intersection of PCH and Second Street is the only study area intersection that is part of CMP arterial monitoring locations. A significant impact would occur if the proposed project increases traffic demand on a CMP facility by two percent of capacity, causing a LOS F. If the facility is already at LOS F, a significant impact would occur if the proposed project increases traffic demand on a CMP facility by two percent of capacity. The results of the capacity analysis indicate that with the construction of the four-lane connection roadway as a mitigation measure, as described above, the proposed project would not increase demand at the intersection by two percent in any of the analyzed time periods. Therefore, the proposed project will not have a significant CMP impact at the intersection.

For purposes of analyzing the mainline freeway impact of the proposed project, the nearest freeway monitoring station is located on the I-405 north of SR-22. As shown in **Table 3L.8** the proposed project does not contribute more than minimum threshold of 150 peak-period trips at the closest CMP monitoring location. Therefore, no detailed impact analysis is warranted at this time.

**TABLE 3L.8
PROJECT ADDED TRIPS AT FREEWAY MONITORING STATIONS**

| Freeway Analysis Segment | Projected Added Trips by Direction | | Traffic Impact Analysis Required? | |
|-----------------------------|------------------------------------|------------|-----------------------------------|------------|
| | Northbound | Southbound | Northbound | Southbound |
| <i>Weekday AM Peak Hour</i> | | | | |
| I-405 North of SR 22 | 21 | 36 | No | No |
| <i>Weekday PM Peak Hour</i> | | | | |
| I-405 North of SR 22 | 24 | 21 | No | No |

SOURCE: Meyer, Mohaddes Associates, *Seaport Marina Project Traffic Impact Report*, 2006.

Conclusion: As shown in Table 3L.8, the proposed project would not contribute more than minimum threshold of 150 peak-period trips at the closest CMP monitoring location. Therefore, less than significant impacts would result.

Mitigation: None required.

Significance After Mitigation: Less than significant.

Impact 3L.3: Could the proposed project substantially increase hazards due to design feature or incompatible uses?

The design of the project would provide adequate emergency access and would comply with all building, fire and safety codes. Project plans would be reviewed by the City Department of Public Works and Transportation Department as well as the LBFD prior to the issuance of a building permit. The proposed project would be compatible with surrounding land uses. For a detailed discussion of this issue please see Section 3G Land Use of this document.

Conclusion: Less than significant impact.

Mitigation: None required.

Significance After Mitigation: Less than significant.

Impact 3L.4: Could the proposed project provide inadequate parking capacity?

The proposed project would provide inadequate parking capacity. Parking for the proposed project would be in above and below grade parking structures and would consist of approximately 1,700 spaces, in compliance with the City of Long Beach Parking Code. In addition, the proposed project includes improvements to Marina Drive (between Second Street and Studebaker Road) and the City-owned parking lot south of Marina Drive to allow for additional parking.

Conclusion: Less than significant impact to parking capacity would result.

Mitigation: None required.

Significance After Mitigation: Less than significant.

Cumulative Impacts

Impact 3L.5: Could the proposed project result in an adverse cumulative transportation and circulation impact?

Cumulative impact consists of an impact that occurs when existing conditions are compared to the future with project conditions including all other sources of traffic growth. The proposed project together with other anticipated development would result in an adverse cumulative transportation and circulation impact. Related projects located in the proposed project area include: the Boeing Specific Plan project (located in City of Seal Beach), Home Depot (at Loynes Drive/Studebaker Road), an expansion of Marina Shores

East (Westminster Avenue/PCH). Cumulative impacts (with South PCH Driveway not signalized) are shown in **Table 3L.9**; 12 intersections would be significantly impacted by cumulative development. Physical roadway mitigation proposed by the Boeing Specific Plan (Second Street/ Studebaker Road) is assumed to be in place in 2009 since that project is fully committed. The cumulative projects have also proposed mitigations at the following project study intersections. However, these measures are not included in the analysis because the City believes they are not sufficiently committed.

- SR-22 westbound on-ramp/Studebaker Road
- SR-22 eastbound on-ramp/Studebaker Road
- Studebaker Road/Loynes Drive
- PCH/Seventh Street
- PCH/Loynes Drive

Table 3L.10 is a comparison of the levels of service between existing conditions and cumulative plus project conditions, with and without mitigation measures in place. Project mitigation measures do not fully mitigate cumulative impacts to a level of insignificance and therefore significant cumulative impacts would remain.

With implementation of project and Boeing Specific Plan mitigation measures, cumulative impacts with the South PCH Driveway not signalized will remain at the following intersections:

- Atherton Street/Bellflower Boulevard (AM/PM peak hours)
- Seventh Street/Park Avenue (AM/PM peak hours)
- Seventh Street/PCH (AM/PM peak hours)
- Seventh Street/Bellflower Boulevard (AM/PM peak hours)
- SR-22 westbound on-ramp/Studebaker Road (PM peak hour)
- Second Street/Bay Shore Avenue (PM peak hour)
- Second Street/Studebaker Road (AM peak hour)

TABLE 3L.9
YEAR 2009 CUMULATIVE ANALYSIS – (SOUTH PCH DRIVEWAY NOT SIGNALIZED)

| Study Intersection | AM | | | | | PM | | | | | Saturday | | | | |
|---|----------|--------------|------------------------------|--------------|--------------|----------|--------------|------------------------------|--------------|--------------|----------|--------------|------------------------------|--------------|--------------|
| | Existing | | 2009 Cumulative Plus Project | | Diff | Existing | | 2009 Cumulative Plus Project | | Diff | Existing | | 2009 Cumulative Plus Project | | Diff |
| | LOS | V/C or Delay | LOS | V/C or Delay | | LOS | V/C or Delay | LOS | V/C or Delay | | LOS | V/C or Delay | LOS | V/C or Delay | |
| PCH/Clark Avenue | C | 0.735 | C | 0.768 | 0.033 | C | 0.785 | D | 0.831 | 0.046 | A | 0.529 | A | 0.574 | 0.045 |
| Anaheim Street/PCH | A | 0.577 | B | 0.607 | 0.030 | C | 0.732 | C | 0.775 | 0.043 | D | 0.825 | D | 0.894 | 0.069 |
| Atherton Street/Bellflower Boulevard | E | 0.945 | E | 0.976 | 0.031 | D | 0.890 | E | 0.926 | 0.036 | B | 0.648 | B | 0.682 | 0.034 |
| Seventh Street/Park Avenue | F | 1.035 | F | 1.078 | 0.043 | E | 0.987 | F | 1.034 | 0.047 | B | 0.667 | C | 0.717 | 0.050 |
| Seventh Street/PCH | F | 1.047 | F | 1.091 | 0.044 | F | 1.108 | F | 1.179 | 0.071 | D | 0.848 | E | 0.906 | 0.058 |
| Seventh Street/Bellflower Boulevard | F | 1.004 | F | 1.038 | 0.034 | E | 0.937 | E | 0.973 | 0.036 | D | 0.800 | D | 0.830 | 0.030 |
| PCH/Bellflower Boulevard | C | 0.739 | C | 0.769 | 0.030 | D | 0.821 | D | 0.895 | 0.074 | C | 0.711 | C | 0.765 | 0.054 |
| Anaheim Street/Studebaker Road | C | 0.768 | D | 0.845 | 0.077 | C | 0.706 | C | 0.792 | 0.086 | A | 0.498 | A | 0.594 | 0.096 |
| SR-22 westbound on-ramp/Studebaker Road | C | 0.739 | D | 0.830 | 0.091 | D | 0.856 | E | 0.946 | 0.090 | B | 0.683 | D | 0.830 | 0.147 |
| SR-22 eastbound on-ramp/Studebaker Road | B | 0.662 | C | 0.758 | 0.096 | C | 0.741 | D | 0.828 | 0.087 | B | 0.634 | C | 0.793 | 0.159 |
| Loynes Drive/Studebaker Road | C | 0.718 | C | 0.709 | -0.009 | C | 0.762 | D | 0.857 | 0.095 | A | 0.598 | D | 0.802 | 0.204 |
| Loynes Drive/PCH | D | 0.837 | E | 0.914 | 0.077 | E | 0.926 | F | 1.083 | 0.157 | D | 0.850 | F | 1.062 | 0.212 |
| Second Street/Livingston Drive | B | 0.690 | C | 0.729 | 0.039 | B | 0.626 | B | 0.685 | 0.059 | A | 0.593 | B | 0.671 | 0.078 |

TABLE 3L.9
YEAR 2009 CUMULATIVE ANALYSIS – (SOUTH PCH DRIVEWAY NOT SIGNALIZED) (CONT.)

| Study Intersection | AM | | | | | PM | | | | | Saturday | | | | |
|----------------------------------|----------|--------------|------------------------------|--------------|--------------|----------|--------------|------------------------------|--------------|--------------|----------|--------------|------------------------------|--------------|--------------|
| | Existing | | 2009 Cumulative Plus Project | | | Existing | | 2009 Cumulative Plus Project | | | Existing | | 2009 Cumulative Plus Project | | |
| | LOS | V/C or Delay | LOS | V/C or Delay | Diff | LOS | V/C or Delay | LOS | V/C or Delay | Diff | LOS | V/C or Delay | LOS | V/C or Delay | Diff |
| Second Street/Bay Shore Avenue | D | 0.818 | D | 0.866 | 0.048 | E | 0.941 | F | 1.007 | 0.066 | B | 0.608 | B | 0.695 | 0.087 |
| Second Street/Naples Drive | B | 0.611 | B | 0.652 | 0.041 | C | 0.776 | D | 0.850 | 0.074 | B | 0.616 | C | 0.705 | 0.089 |
| Second Street/East Marina Drive | C | 0.710 | C | 0.759 | 0.049 | D | 0.849 | E | 0.927 | 0.078 | C | 0.781 | E | 0.970 | 0.189 |
| Second Street/PCH | E | 0.967 | E | 1.00 | 0.033 | F | 1.028 | F | 1.131 | 0.103 | E | 0.928 | F | 1.053 | 0.125 |
| Second Street/Shopkeeper Road | B | 0.658 | C | 0.718 | 0.060 | D | 0.807 | D | 0.868 | 0.061 | C | 0.763 | D | 0.844 | 0.081 |
| Second Street/Studebaker Road | E | 0.930 | E | 0.956 | 0.026 | D | 0.889 | E | 0.902 | 0.013 | C | 0.756 | D | 0.844 | 0.088 |
| Westminster/Seal Beach Boulevard | B | 0.686 | C | 0.787 | 0.101 | B | 0.681 | D | 0.869 | 0.188 | A | 0.446 | B | 0.680 | 0.234 |
| Studebaker Road/Marina Drive (1) | B | 10.9 | B | 11.7 | 0.8 | B | 12.0 | B | 14.2 | 2.2 | B | 13.6 | C | 17.3 | 3.7 |
| Studebaker Road/PCH | D | 0.844 | E | 0.938 | 0.094 | E | 0.972 | F | 1.220 | 0.248 | C | 0.780 | F | 1.081 | 0.301 |
| Marina Drive/PCH (1) | A | 1.3 | A | 1.4 | 0.1 | A | 2.1 | A | 2.5 | 0.4 | A | 2.5 | A | 3.0 | 0.5 |
| PCH/Bolsa/Main | C | 0.718 | C | 0.779 | 0.061 | C | 0.755 | D | 0.807 | 0.052 | B | 0.683 | C | 0.782 | 0.099 |
| PCH/Seal Beach Boulevard | D | 0.869 | E | 0.909 | 0.040 | C | 0.761 | D | 0.820 | 0.059 | C | 0.742 | C | 0.793 | 0.051 |

Note:

Bold "diff" column indicates significantly impacted location.

(1) denotes unsignalized intersection, overall intersection level of service is shown.

SOURCE: Meyer, Mohaddes Associates, *Seaport Marina Project Traffic Impact Report*, 2006.

**TABLE 3L.10
PEAK HOUR CUMULATIVE LOS COMPARISON WITH MITIGATION**

| Year 2009 AM | | | | | | | | | |
|-------------------------------|----------|-------|------------------------------|-------|--------------|--|-------|--------------|---|
| Study Intersections | Existing | | 2009 Cumulative Plus Project | | Diff | 2009 Cumulative Plus Project with Mitigation | | Diff | Significant Cumulative Impact? (Yes/No) |
| | LOS | V/C | LOS | V/C | | LOS | V/C | | |
| PCH/Loynes Drive | D | 0.837 | E | 0.914 | 0.077 | C | 0.729 | -0.108 | No |
| Second Street/Marina Drive | C | 0.710 | C | 0.759 | 0.049 | C | 0.725 | 0.015 | No |
| Second Street/PCH | E | 0.967 | F | 1.020 | 0.053 | E | 0.949 | -0.018 | No |
| Second Street/Shopkeeper Road | B | 0.658 | C | 0.718 | 0.060 | B | 0.666 | 0.008 | No |
| Studebaker Road/PCH | D | 0.844 | E | 0.933 | 0.089 | D | 0.852 | 0.008 | No |
| Year 2009 PM | | | | | | | | | |
| Study Intersections | Existing | | 2009 Cumulative Plus Project | | Diff | 2009 Cumulative Plus Project with Mitigation | | Diff | Significant Cumulative Impact? (Yes/No) |
| | LOS | V/C | LOS | V/C | | LOS | V/C | | |
| PCH/Loynes Drive | E | 0.926 | F | 1.083 | 0.157 | E | 0.971 | 0.045 | Yes |
| Second Street/Marina Drive | D | 0.849 | E | 0.889 | 0.040 | D | 0.878 | 0.029 | No |
| Second Street/PCH | F | 1.028 | F | 1.099 | 0.071 | F | 1.093 | 0.065 | Yes |
| Second Street/Shopkeeper Road | D | 0.807 | D | 0.868 | 0.061 | C | 0.768 | -0.039 | No |
| Studebaker Road/PCH | E | 0.972 | F | 1.203 | 0.231 | F | 1.001 | 0.029 | Yes |
| Year 2009 Saturday | | | | | | | | | |
| Study Intersections | Existing | | 2009 Cumulative Plus Project | | Diff | 2009 Cumulative Plus Project with Mitigation | | Diff | Significant Cumulative Impact? (Yes/No) |
| | LOS | V/C | LOS | V/C | | LOS | V/C | | |
| PCH/Loynes Drive | D | 0.850 | F | 1.062 | 0.212 | D | 0.886 | 0.036 | No |
| Second Street/Marina Drive | C | 0.781 | E | 0.970 | 0.189 | D | 0.830 | 0.049 | No |
| Second Street/PCH | E | 0.928 | F | 1.034 | 0.106 | E | 0.989 | 0.061 | Yes |
| Second Street/Shopkeeper Road | C | 0.763 | D | 0.844 | 0.081 | C | 0.792 | 0.029 | No |
| Studebaker Road/PCH | C | 0.780 | F | 1.060 | 0.280 | D | 0.810 | 0.030 | No |

Note: With-Project levels of service assume a signal is in place at the south (main) project driveway on PCH.

SOURCE: Meyer, Mohaddes Associates, *Seaport Marina Project Traffic Impact Report*, 2006.

- PCH/Seal Beach Boulevard (AM peak hour)
- PCH/Loynes Drive (AM/PM/Saturday peak hours)
- Second Street/PCH (AM/PM/Saturday peak hours)
- Studebaker Road/PCH (AM/PM peak hours)

As shown, the project and Boeing Specific Plan mitigation measures do not fully mitigate the cumulative impacts to a level of insignificance, and significant cumulative impacts would remain.

Conclusion: The proposed project would result in significant and unavoidable adverse cumulative transportation and circulation impacts.

Mitigation: None.

Significance After Mitigation: Significant and unavoidable impacts.

3M. Other Issues

This section focuses on other issues that were eliminated in the Initial Study, but subsequent to distribution of the Initial Study it was determined necessary to include a discussion in the EIR. Specifically this section includes a discussion of the potential presence of migratory birds within or near the project site, and particularly great blue heron (*Ardea herodias*), which have been seen within the Alamitos Bay Marina outside of the traditional mid-January through Mid-July nesting period.¹

3M.1 Environmental Setting

The proposed project site is located in between the San Gabriel River and the Los Cerritos Channel at the southwest corner of PCH and Second Street. Directly west of the project site (across Marina Drive) is the publicly-owned Alamitos Bay Marina, a well known waterland in the city of Long Beach and home to many wildlife resources. Additionally, the project site is located within the vicinity of other waterways, beaches, and open spaces, including the Los Cerritos Wetlands.

The proposed project site is surrounded by a number of large trees that could be used for roosting and nesting purposes by migratory birds, and especially water birds like the great blue heron, foraging in adjacent open spaces or in the nearby Pacific Ocean or other local waterways, and could be considered a native wildlife nursery site if migratory birds are utilizing the trees for nesting purposes. Construction activities could cause the direct loss of nesting trees or the abandonment of nests by migratory birds or raptors due to harassment by noise and dust. This would be a violation of the Migratory Bird Treaty Act (MBTA), California Fish and Game Code (CFG Code), City of Long Beach Resource Management Plan (RMP), and could impede the use of native wildlife nursery sites, which are all potentially significant impacts.

During project operations, impacts to nesting birds would not occur because the proposed project is a mixed residential- and commercial-use building that would not create significant amounts of noise, dust, or other irritants that could cause nest abandonment at the project site. Therefore, there would be no impact to nesting birds during the operational phase of the project.

3M.2 Regulatory Background

Federal

The MBTA is a statute implemented the 1916 Convention between the United States and Great Britain (for Canada) for the protection of migratory birds. Later amendments

¹ Segura, Joe, *Assembling a wetlands acquisition*. Beach Week, Press-Telegram Publication, December 17, 2005.

implemented treaties between the United States and Mexico, the United States and Japan, and the United States and the Soviet Union (now Russia).

The MBTA establishes a federal prohibition, unless permitted by regulations, to:

"pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention . . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird" (16 U.S.C. 703).

The MBTA is applicable for the proposed project because harassment of migratory birds that causes nest abandonment is considered "take."

State

Sections 3503, 3503.5, and 3513 of the CFG Code prohibit "take" of all birds and their active nests, including great blue heron and other species.

Local

The City of Long Beach General Plan includes a Resources Management Plan (RMP), as part of Long Beach's Local Coastal Program, which is designed to be responsive to the mandates and guidelines of the Coastal Act of 1976 (Act). The RMP is an implementation plan, providing processes and actions to carry out the intent of the Act and the desires of the citizenry consistent with and responsive to the Act. The overall thrust of this implementation plan is to improve and assure public access to coastal and tide-waterland amenities, to improve and maintain water quality, to seek and establish harmony between public use of waterlands and private use of surrounding urban areas, and to protect and enhance the viability of environmentally sensitive areas that is home to wildlife resources, including the blue heron.

3M.2 Environmental Impacts and Mitigation Measures

Methodology

The proposed project site does not contain native habitat types or other significant biological resources and, therefore, a biological survey of the site was not warranted during preparation of the Initial Study. However, a news report in *Beach Week* confirmed the potential for great blue heron, and other migratory birds, within the project vicinity.² Therefore, this section discusses the potential for construction-related impacts to nesting

² Segura, Joe, *Assembling a wetlands acquisition*. Beach Week, Press-Telegram Publication, December 17, 2005.

birds within trees at or near the site and outlines mitigation to reduce potential impacts to a less-than-significant level.

Significance Criteria

The criteria used to determine the significance of an impact are based on the Initial Study Checklist in Appendix G of the *CEQA Guidelines* and City precedent. Several biological resource criteria were eliminated from further consideration because the project would not: (1) have a substantial adverse effect on candidate, sensitive, or special-status species; (2) have a substantial adverse effect on any riparian habitat or other sensitive natural community; (3) have a substantial adverse effect on federally protected wetlands; and (4) conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

These issues, therefore, will not be discussed here. Please refer to the Initial Study (Appendix A) for further clarification.

For this analysis, the proposed project may result in significant impacts if it would:

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; and/or
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Project Impacts

Impact 3M.1: Could the proposed project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

As mentioned above, construction of the proposed project could cause the direct loss of nesting trees or the abandonment of nests by migratory birds or raptors due to harassment by noise and dust. This would be a violation of the MBTA, CFG Code, and the RMP, and could impede the use of native wildlife nursery sites, which are all potentially significant impacts.

Conclusion: The proposed project with incorporation of mitigation would have a less than significant impact to nesting birds.

Mitigation Measure

Measure 3M.1: To address the potential presence of nesting migratory birds and resulting MBTA and CFG Code impacts, within 15 days of any project actions that

will cause a potentially substantial increase or other change in existing disturbance, the project proponent shall have a qualified biologist conduct a preconstruction migratory bird nesting survey. This survey shall cover all reasonably potential nesting locations for the relevant species on or closely adjacent to the project site.

If an active nesting effort is confirmed or considered very likely by the biologist, no construction activities shall occur within at least 500 feet of the nesting site until measures to address the constraint are agreed to by the project proponent, U.S. Fish and Wildlife Service (USFWS) personnel, and California Department of Fish and Game (CDFG) personnel.

Potentially appropriate measures to take may include one or more of the following as authorized by the USFWS and CDFG: (1) delaying work at the nest site location until either the nest has failed (for non-project-related reasons) or seven days after the last young leaves the nest, or (2) taking the young nestlings to a qualified wildlife rehabilitation center. Note that in the latter situation, it will normally be necessary for the biologist retrieving the young to be properly experienced and permitted for the specific work required.

Significance After Mitigation: Less than significant.

Project Impacts

Impact 3M.2: Could the proposed project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

See Impact 3M.1 above.

Conclusion: The proposed project with incorporation of mitigation would have a less than significant impact to nesting birds.

Mitigation Measures

Incorporation of **Mitigation Measure 3M.1** above would reduce impacts to a level of less than significant. See **Mitigation Measure 3M.1** for more information.

Significance After Mitigation: Less than significant.

Cumulative Impacts

Impact 3M.3: Could the proposed project with other area projects have cumulative impacts on biological resources in the project area?

The proposed project would be developed on a site that does not contain native habitat types and affords very limited opportunities for biological resources, mainly nesting opportunities for birds within the trees at the site. The proposed project is located in a developed area that also has limited open space and opportunities for biological resources. Therefore, construction and operation of the proposed project would not appreciably affect biological resources to the point where a significant impact to cumulative biological resources would occur because there is an already very limited opportunity for biological resources at the site and within its vicinity. As a result, there would be a less-than-significant impact to cumulative biological resources.

Conclusion: The proposed project with other area projects would not contribute to cumulative impacts on biological resources in the project area.

Mitigation: None required.

Significance After Mitigation: Less than significant.
